

REPORT

OF THE

Indian Tariff Board

ON THE

GRANT OF PROTECTION TO THE
PAPER AND PAPER PULP INDUSTRIES



DELHI: MANAGER OF PUBLICATIONS
1938

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TABLE OF CONTENTS.

PARA.	PAGE.
Preliminary	v
CHAPTER I.—THE PAPER INDUSTRY IN INDIA.	
1. Beginning of paper Industry	1
2. Tariff Board of 1925	1
3. Bamboo Paper Industry (Protection) Act of 1925	1
4. Tariff Board of 1927	2
5. Changes in 1931 in rates of duty	2
6. Tariff Board of 1931	2
7. Bamboo Paper Industry (Protection) Act of 1932	3
8. Principle of classification proposed	3
9. Ottawa Agreement	3
10. Tariff Board of 1935	3
11. Present Tariff Schedule	4
12. Progress of paper industry	7
13. Progress in the production of indigenous pulp	9
14. New developments in the industry	9
CHAPTER II.—RAW MATERIALS.	
15. Primary and auxiliary materials	11
16. Bamboo	11
17. Price of raw bamboo	13
18. Grass	14
19. Price of grass	15
20. Subsidiary raw materials	16
21. Wood	17
22. Other materials	17
23. Imported pulp	17
24. Price of imported pulp	20
25. Auxiliary materials	20
26. Conclusion on the availability of raw material	21
27. Possibility of export of pulp	22
CHAPTER III.—MANUFACTURE.	
28. Developments of pulp manufacture	24
29. Manufacture of pulp from bamboo	25
30. Acid process of manufacture	25
31. Alkali process of manufacture	26
32. Bleaching process	26
33. Cost of manufacture of pulp	26
34. Improvements in manufacture	27
35. Possible reductions in costs	28
36. Estimated cost of pulp manufacture in mill of average capacity	29
37. Manufacture of pulp from grass	29
38. Cost of manufacture	29

PARA.	PAGE.
39. Manufacture of pulp from waste paper, rags and other subsidiary materials	30
40. Manufacture of paper	30
41. Cost of manufacture	31
42. Use of imported pulp	32
43. Protective duty on imported pulp	34
44. Rate of protective duty recommended	36
45. Effect of reduction in duty on cost of manufacture	37
46. Overhead charges	37
47. Fair selling price	37
CHAPTER IV.—QUALIFICATION FOR PROTECTION.	
48. Supply of raw material	39
49. Cheap power	39
50. Supply of labour	39
51. Wages	40
52. Housing	41
53. Other amenities	41
54. Market for paper	41
55. Probable increase in demand for paper	43
56. Prices	44
57. Combination among mills to maintain price levels	45
58. Burden on the consumer	46
59. The printing and publishing trades	46
60. Improvement in quality of Indian made paper	48
CHAPTER V.—MEASURE OF PROTECTION.	
61. Fluctuations in the prices of imported article	52
62. Difficulties of a sliding scale of import duties	53
63. Continuance of protection for industry recommended	55
64. Question of protection to new classes of paper	57
65. Cartridge paper	57
66. Poster paper	57
67. Blotting paper	58
68. 'Kraft' packing paper	58
69. Sand paper	59
70. Further enquiry suggested	59
71. Measure of protection recommended	60
72. Effect on financial position of companies	62
73. Changes in classification of paper for Tariff Schedule	63
74. New Tariff Schedule	66
75. Change in nomenclature of Act	67
CHAPTER VI.—SUPPLEMENTARY PROPOSALS.	
76. Conditions in paragraph 292 of the Fiscal Commission Report	68
77. Progress in Indianisation of staff	68
78. Training of Apprentices	68
79. Forest Research Institute at Dehra Dun	69
80. Testing of bamboo pulp for the manufacture of kraft paper	70
81. Experiments in manufacture of mechanical pulp	70

CONTENTS.

PARA.		PAGE.
82.	Experiments on utilisation of 'bagasse'	70
83.	Inadequacy of grant to paper section of the Institute	70
84.	Manufacture of cellulose	72
85.	Information Bureau	72
86.	Training course for apprentices	72
87.	Handmade paper	72
88.	Manufacture of boards	74

CHAPTER VII.—SUMMARY.

Summary		75
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APPENDICES.

APPENDIX A.—Quantities of auxiliary materials used by mills in 1936-37		79
APPENDIX B.—Funds urgently required by the Paper Pulp Section of the Forest Research Institute		81
APPENDIX C.—Description of the process of manufacture of paper and pulp as practised in Madras		83
APPENDIX D.—Cost of making 9 reams of local handmade paper (size 17" × 27") containing 40 per cent. hemp and 60 per cent. waste paper		84

2. The Tariff Board entered upon its duties on December 13th, 1937, and issued a Press Communiqué in the terms of the Govern-

ment of India Resolution calling upon all
 Questionnaires. firms and persons interested to submit written representations not later than the 25th January, 1938. Two questionnaires were issued, one for manufacturers and the other for paper importers and traders and other persons interested in the industry. Copies of these questionnaires were sent to Provincial Governments, Chambers of Commerce and other associations likely to be interested and replies were asked for by 31st January, 1938. Extensions of the period within which replies should be submitted were given when requested and the Board continued to receive original or supplementary representations until April.

3. We started on tour on December 13th and after short visits to Bombay and Poona to inspect paper mills and gather some preliminary information, halted at Madras

Tour programme. to receive any oral representations that might be offered and to hold discussions with the Provincial Government and Customs officials. We next proceeded to Calcutta, inspecting a paper mill on the way. In Calcutta and its neighbourhood we inspected the four most important mills at present manufacturing paper. We also recorded evidence from six paper mills, the Paper Makers' Association, the Paper Importers and Paper Traders' Associations and the Collector of Customs between February 2nd and 20th, and had the advantage of a discussion with the Provincial Government.

From Calcutta we proceeded to Lucknow, where we inspected a mill and recorded evidence and also discussed certain matters with representatives of the Provincial Government. From Lucknow we visited Dehra Dun, inspected the Paper Section of the Forest Research Institute and recorded evidence from the officers concerned. Our next tour, after a short halt in Delhi, was to Kathiawar in connection with another enquiry, but the opportunity was taken to inspect a paper mill near Ahmedabad. Proceeding in turn to Bombay and Poona we completed our inspection and the record of evidence from witnesses not examined elsewhere.

4. The case for the continuance of protection for the Industry was presented partly by the Indian Paper Makers' Association to

which most of the existing and new mills
 Presentation of case for protection. under construction belong, but mainly by individual mills who had their own special points of view put forward. We have to acknowledge the readiness of all concerned to put all the facts and figures which we required before us without reserve.

In the enquiry of 1931 the continuance of protection was opposed by both the Paper Importers and Paper Traders' Associations. On this occasion the two Associations have stated that in present conditions they do not object in principle to the continuance of protection provided that the measure of protection is not excessive.

Chambers of Commerce and similar bodies have in general supported the claim.

5. We have found it advisable to adopt an arrangement of our Report somewhat different from that followed by the Tariff Board of 1931. Beginning with a preliminary survey of the progress made by the industry, we deal in succession with Raw Materials, Manufacture, Qualifications for protection, Measure of Protection and conclude with some supplementary proposals.

Unless otherwise stated, figures for raw material, pulp and paper should be taken to be on an 'air dry' basis, *i.e.*, containing 10 per cent. of moisture. The moisture content varies according to atmospheric conditions in different periods of the year and may be higher or lower than 10 per cent., which is the average figure adopted by previous Tariff Boards, and seems to us reasonable.

In referring the question of the continuance of protection to the Paper Industry to the Tariff Board, the Government of India stated that it was open to the Tariff Board to submit recommendations relating to the revenue surcharge on the protective duties in advance of its main report. We submitted our preliminary report on 31st March, 1938, but the decision of the Government of India had not been announced before the completion of our main report.

6. We desire to acknowledge the services rendered to us by our Secretary Rai Sahib H. C. Sen, whose long experience of Tariff Board enquiries has been of great value and of Mr. Amrit Lal Sahgal, B.A., LL.B., A.C.A., R.A., whose expert knowledge as a Chartered Accountant has facilitated the statistical part of our work.

Personnel of the Board.

President . Sir Geoffrey Bracken, K.C.I.E., C.S.I., I.C.S.

Member . Mr. Fazal Ibrahim Rahimtoola.

Secretary . Rai Sahib H. C. Sen.

PRELIMINARY.

The period of protection afforded to the Paper Industry for certain classes of paper by the Bamboo Paper Industry (Protection)

Act of 1932 expires on the 31st March, 1939.

Terms of Reference. The Government of India in their Resolution No. 202-T. (1)/36, dated the 11th December, 1937, have requested the Tariff Board to re-examine the question of the protection enjoyed by the Paper and Pulp industries and to report what protective measures (if any) should be continued after the 31st March, 1939. The terms of the Government of India Resolution are as follows:—

“ The protection afforded to the Paper and Paper Pulp Industries by the Bamboo Paper Industry (Protection) Act, 1932, will determine on the 31st March, 1939. A subsidiary enquiry into the question of classification of paper for tariff purposes was held by the Tariff Board in 1935, and the action taken upon the Board's recommendations having resulted in a not inconsiderable extension of the range of protection previously enjoyed by the Indian paper making industry, the Government of India decided to review the necessity or desirability of maintaining the extra measure of protection which was fortuitously afforded by the imposition of the revenue surcharge of 25 per cent. in 1931. This matter has accordingly been enquired into departmentally, but, owing to the complicated nature of the data to be examined and in view of the imminence of this further enquiry by the Tariff Board into the whole question of protection to the Industry, the Government of India have taken no action in regard to the surcharge.

“ 2. The Tariff Board is now requested to re-examine the question of the protection enjoyed by the Paper and Paper Pulp Industries in India and to report what protective measure (if any) should be continued after the 31st March, 1939.

“ 3. If the Tariff Board is satisfied during the course of its investigations that the revenue surcharge on the paper protective duties is no longer justifiable it will be at liberty to make its recommendations in this behalf in advance of its main report.

“ 4. In making its recommendations the Tariff Board will take all relevant considerations into account including those stated in parts (b) and (c) of the Resolution adopted by the Legislative Assembly on the 16th February, 1923.

“ 5. Firms or persons interested in the paper making industry or in industries dependent on the use of paper who desire that their views should be considered by the Tariff Board should address their representations to the Secretary to the Board ”.

Report

on the

Grant of Protection to the Paper and Paper Pulp Industries.

CHAPTER I.

The Paper Industry in India.

1. The manufacture of paper in India is an old established industry. The first paper mill, the Bally Mills on the Hooghly, now defunct, was started as early as 1870, followed in 1879 by the Upper India Couper Paper Mills. By 1925, the year in which the question of protection for the industry was first considered, there were 9 mills in existence and two new mills were projected.

Beginning of Paper Industry.

2. At the time when the first Tariff Board reported on the question of protection for the industry, there was a uniform revenue duty of 15 per cent. on all classes of paper. The principal indigenous material then used for manufacture was *sabai* grass. The Board found that with one exception the mills using grass could not establish a claim for the grant of protection under the conditions laid down by the Fiscal Commission, but considered that the possibilities of making paper from bamboo pulp, the manufacture of which was still in the experimental stage, were promising enough to justify some measure of protection, without a final commitment to the policy of protection. It, therefore, suggested the provision of financial assistance to mills prepared to experiment in the manufacture of bamboo pulp, and proposed a specific duty of one anna a pound on all writing paper other than chromo, marble, flint, poster, stereo and newsprint containing 65 per cent. or more of mechanical pulp.

3. The Government of India rejected the suggestion that financial assistance should be given to mills, but accepted the proposal for protective duties on certain classes of paper. The Bamboo Paper Industry (Protection) Act was passed in September, 1925, giving protection up to 31st March, 1932, to "Printing paper (excluding chromo, marble, flint, poster and stereo) all sorts containing less than 65 per cent. of mechanical wood pulp and to writing paper all sorts including ruled or printed forms and account and manuscript books and the binding thereof".

Bamboo Paper Industry (Protection) Act of 1925.

4. In 1927 the question whether the percentage of mechanical pulp should be calculated on the net fibre content of the paper or on the total weight was referred to the Tariff Board of 1927. Tariff Board. As a result of its recommendations an amending Act, Act XX of 1927, was passed which provided that the percentage of mechanical pulp should be calculated on the fibre content. The wording of the Schedule attached to the Act of 1925 was also amended so as to provide that printing paper containing no mechanical pulp should be liable to the protective duty and that in the case of ruled or printed forms (including letter paper with printed headings) and account and manuscript books and the binding thereof, if the protective duty was less than the revenue *ad valorem* duty, the *ad valorem* duty should be levied. The general *ad valorem* rate of revenue duty was at the time 15 per cent. When the general level of revenue duty was raised from 15 per cent. to 20 per cent. by the Indian Finance Act passed in March, 1931, no change was made in the *ad valorem* protective duty of 15 per cent. imposed on writing paper as an alternative to the specific duty of 1 anna a pound.

5. In November, 1931, the Indian Finance (Supplementary and Extending) Act 1931 imposed a surcharge of 25 per cent. on the existing revenue and protective duties levied on different classes of paper, thus raising the specific protective duty to 1 anna 3 pies per pound and the alternative *ad valorem* duty to 18 $\frac{3}{4}$ per cent.

6. In March, 1931, the Government of India referred to the Tariff Board the question of how far the protective duties imposed by the Bamboo Paper Industry (Protection) Act of 1925 had achieved the purpose of developing the manufacture of paper from bamboo and whether it was desirable to continue protective measures beyond the 31st March, 1932. The Board found that there were ample supplies of bamboo available in India and Burma not only to supply the whole Indian demand for pulp but also to develop a large export trade. Difficulties in the mechanical treatment of bamboo had proved greater than was expected and had delayed the development of bamboo as a pulp making material, but very considerable progress had been made and further experiments were being undertaken. The quality of paper made from bamboo was regarded as satisfactory, considering that manufacture was still in the experimental stage. It also found that, though the expansion of the paper industry must be based mainly on bamboo, grass also occupied a recognised place in its development and for this reason recommended that no distinction should be made between the two in the application of proposals for assistance. As regards auxiliary materials, a considerable increase in the use of indigenous materials had occurred, and most of them were obtainable in India at economical prices. In the matter of imported wood pulp, it found that a large increase in its use by Indian mills had taken place for the reasons which it explained.

Its main recommendations were that the Paper industry satisfied the conditions laid down by the Fiscal Commission and that the existing protective duties on paper should continue for a period of seven years, but in order to further the development of bamboo pulp a duty of Rs. 45 per ton should be levied on imported pulp. The Board was not satisfied with the classification of printing and writing paper and recommended examination of the definitions according to trade usage by a conference at which all the interests concerned should be represented.

7. The main recommendations of the Tariff Board were accepted by the Government of India and the Legislature. The Bamboo

Bamboo Paper Industry (Protection) Act of 1932.

Paper Industry (Protection) Act of 1932 continued protection for the classes of paper already protected at the existing rate, but raised the percentage of mechanical wood pulp qualifying paper for exemption from the protective duty from 65 to 70 per cent. and imposed a protective duty of Rs. 45 per ton on imported pulp, all duties being subject to the revenue surcharge imposed in November, 1931.

8. The Government of India, however, found themselves unable to accept the method of procedure suggested for the better definition of the different classes of paper included

Principle of classification proposed.

according to ordinary trade usage in the terms 'Printing' and 'Writing' paper, as used in the import Tariff Schedule. The definitions were therefore left unchanged, but it was decided to publish a new classification scheme based on the principle that the protective duty should be made applicable to all kinds of paper except those specified for exemption instead of specifying the kinds of paper to be protected and leaving all other kinds of paper subject to the revenue duty. A provisional scheme of classification was circulated to all parties concerned, but the views expressed were so divergent that the Government found it impossible to arrive at any satisfactory conclusion.

9. Some changes were made in the Tariff Schedule in consequence of the Ottawa Trade Agreement embodied in the Indian

Ottawa Agreement.

Tariff (Ottawa Trade Agreement) Amendment Act (XXV of 1932) and the Supplementary Amendment Act (VIII of 1933). The effect of these changes was to raise the standard rate of duty on some classes of paper subject to revenue duty to 30 per cent. with a preferential rate of duty of 20 per cent. for articles which were the manufacture of the United Kingdom.

10. The Government of India having found no satisfactory solution of the classification problem, decided in 1935 to refer the

Tariff Board of 1935.

matter to the Tariff Board. The Board in its report dealt exhaustively with the history of the different schemes of classification of paper adopted or proposed since 1925 and with the principles on which a revised classification could be based. It explained the difficulties of a purely

scientific classification and arrived at the conclusion that the scheme proposed by the Government of India in 1932 had no compensatory advantages against the difficulty of arriving at an exhaustive enumeration of the exempted kinds of paper and other disadvantages. It examined other alternative schemes, but found them to be impracticable, and finally arrived at the conclusion that there was no option but to fall back on the existing scheme which had at least the merit of being familiar to the trade and the Customs Department. Some slight modifications in the scheme were suggested, but the Board considered the devising of a more acceptable classification had better be left for a fresh statutory enquiry, since its terms of reference precluded an extension or restriction of the protection granted to the industry by the Legislature.

11. The main recommendation of the Tariff Board was accepted by the Government of India, but it was decided to defer legislation on such modifications of the Tariff Schedule of paper as required legislative sanction.

The Tariff Schedule appended to the Indian Tariff Act XXXII of 1934 as it stood on last March, 1938, is as follows :—

THE PAPER INDUSTRY IN INDIA.

5

Item No.	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of		Duration of protective rates of duty.
				The United Kingdom.	A British Colony.	
43	Wood Pulp	Protective	Rs. 56-4 per ton	..	..	March 31st, 1939.
44	Paper, including chrome, marble, flint, poster and stereo printing paper; articles made of paper and papier mache; paste-board, millboard and carboard, all sorts other than straw-board.	Preferential revenue.	30 per cent. <i>ad valorem</i>	20 per cent. <i>ad valorem</i> .	..	
	Tariff value—					
	Packing and wrapping paper—					
		Rs. A. P.	per lb.			
	Machine-glazed pressing		0 1 8			
	Manilla, machine-glazed or unglazed, and sulphite envelope		0 1 11			
	Kraft and imitation kraft		0 2 2			
44 (1)	Printing paper (excluding chrome, marble, flint, poster and stereo); all sorts which contain no mechanical wood pulp or in which the mechanical wood pulp amounts to less than 70 per cent. of the fibre content.	Protective	One anna and three pies per lb.	..	..	March 31st, 1939.
44 (2)	Printing paper, all sorts not otherwise specified which contain mechanical wood pulp amounting to not less than 70 per cent. of the fibre content*, and strawboard, all sorts.	Revenue	25 per cent. <i>ad valorem</i> .	..	..	
	Tariff value—					
		Rs. A. P.	per cwt.			
	Strawboards (not lined)		4 12 0			

B

* Under Government of India, Finance Department (Central Revenues) Notification No. 33, dated the 22nd June 1935, as amended subsequently, newsprint in reels, containing Mechanical Wood pulp amounting to not less than 70 per cent. of the fibre content is liable to duty at the following rates:—(i) unglazed—Rs. 1-8-0 per cwt. and (ii) Other sorts.

Item No.	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of		Duration of protective rates of duty.
				The United Kingdom.	A British Colony.	
44 (3)	Writing paper— (a) Ruled or printed forms (including letter paper with printed headings) and account and manuscript books and the binding thereof. (b) All other sorts	Protective Protective	One anna and three pies per lb. or 18½ per cent. <i>ad valorem</i> , whichever is higher. One anna and three pies per lb.	..	..	March 31st, 1939.
44 (4)	Trade catalogues and advertising circulars imported by packet, book, or parcel post.	Free	Free	..	..	
44 (5)	Paper money	Free	Free	..	..	
44 (6)	Newspapers, old, in bales and bags— Rs. A. P. per cwt. Tariff value— Old newspaper in bales and bags 4 8 0	Revenue Preferential Revenue	25 per cent. <i>ad valorem</i> . 30 per cent. <i>ad valorem</i>	..	..	
45	Stationery including drawing and copy books, labels, advertising circulars, sheet or card almanacs and calendars, Christmas, Easter and other cards, including cards in booklet forms; including also waste paper but excluding paper and stationery otherwise specified.*	Revenue	Free	..	..	
45 (1)	Books printed, including covers for printed books, maps, charts, and plans, proofs, music, manuscripts, and illustrations specially made for binding in books.	Revenue	50 per cent. <i>ad valorem</i> .	..	..	
45 (2)	Prints, Engravings and Pictures (including photographs and picture post cards) on paper or cardboard.†	Revenue		..	..	

* Under Government of India, Finance Department (Central Revenues), Notification No. 33, dated the 22nd June, 1935, as amended subsequently: posters, pamphlets and other printed material intended for tourist propaganda purposes, provided they are issued by or under the auspices of the Governments of the countries, being countries outside India, within which travel is to be stimulated and are not primarily intended to advertise the services of any private tourist agency, are exempt from payment of import duty.

† Under Government of India, Finance Department (Central Revenues), Notification No. 33, dated the 22nd June, 1935, wall pictures and diagrams such as are ordinarily used for instructional purposes are exempt from payment of import duty.

12. Such in outline has been the course of events affecting the Paper industry since protection was first granted in 1925. We shall next proceed to consider the progress made by the industry since 1930-31 as shown in the following Table:—

TABLE I.

Year.	No. of mills working.	QUANTITY OF PULP USED.				PAPER INCLUDING BOARDS BUT EXCLUDING OLD NEWSPAPERS, OTHER KINDS OF PAPER AND NEWSPRINTING PAPER.						Grand Total.
		Indi- genous.	Per cent.	Imported.	Per cent.	Indian.			Imported.			
						Protected.	Not pro- tected.	Total.	Protected.	Not pro- tected.	Total.	
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1931-32	8	17,571	46.67	20,081	53.33	35,738	4,820	40,558	12,393	29,784	42,177	82,735
1932-33	8	17,718	45.26	21,424	54.74	35,370	4,847	40,217	11,490	45,592	57,082	97,299
1933-34	8	21,867	52.21	20,016	47.79	38,151	5,507	43,658	13,005	37,378	50,383	94,041
1934-35	8	23,126	53.95	19,737	46.05	40,084	4,517	44,601	11,163	44,789	55,952	100,553
1935-36	9	30,288	64.57	16,615	35.43	42,839	5,260	48,099	12,096	59,096	71,192	119,291
1936-37	9	35,374	70.32	10,976	29.68	43,364	5,167	48,531	11,840	53,283	65,123	113,654

A new mill named the Gujrat Paper Mills, Limited, situated near Ahmedabad began manufacture in 1935-36. The Punjab Paper Mills Company which was in liquidation in 1931 was taken over by a new company and restarted manufacture in April, 1937, under the name of Shree Gopal Paper Mills, Limited. On the other hand, the Andhra Paper Mills which manufactured a small quantity of paper in 1930-31, ceased to work and is now in process of reconstruction.

Thus the number of mills actually working in 1937-38 was 10. There has been no marked increase in the paper making capacity of the mills, but, except in 1932-33, there has been a steady improvement in the total output. The increase in manufacture is most marked in the case of printing paper. The output of writing paper has fluctuated to some extent but has slightly increased since 1931. In the case of other classes of paper there have been variations in the quantities manufactured from year to year, but no considerable increase except Badami paper.

13. The most important change that has occurred since 1930-31 is the increase in the production of indigenous pulp as compared with the quantity of foreign pulp imported. The quantity of bamboo pulp used has increased in six years from 5,228 tons to 19,281 tons; of grass pulp, from 9,049 to 11,510 and of pulp made from other indigenous materials from 5,992 to 7,919. On the other hand the quantity of imported pulp used has decreased from 20,081 tons to 10,976 tons in the same period.

The increased use of indigenous pulp is due in part to improvements in the processes of manufacture, but mainly to the stimulus given to internal production by the imposition of the protective duty of Rs. 45 per ton (increased by the revenue surcharge to Rs. 56-4 per ton) following the recommendation of the Tariff Board of 1931 which considered the duty necessary to 'make it worthwhile for a paper mill to manufacture the pulp it requires from bamboo rather than to import pulp'. The object of the duty may be considered to have been in some measure fulfilled. Incidentally the imposition of the duty and the recent rise in the price of imported pulp have forced mills, who do not make pulp from bamboo or grass, to use increased quantities of other indigenous materials such as waste paper, rags and hemp.

14. Important new developments in the industry are now in progress. Apart from the reconditioning of two mills which had ceased manufacture, four new mills are under construction and expect to begin manufacture before the end of 1938. Three of them propose to use bamboo or bamboo and grass as their principal material for the manufacture of pulp, one in Orissa, one in Bihar and the third in Mysore State. The fourth mill, located at Saharanpur in the United Provinces, will use grass only. One of

the new mills is designed to manufacture 'kraft' wrapping paper, an interesting new departure. Other paper mill projects are, we understand, under consideration, but have not advanced far enough to enable us to forecast which of them is likely to materialise as a concrete scheme, except a company in Hyderabad State which, we are informed, is likely to be floated before the end of 1938.

CHAPTER II.

Raw Materials.

15. The raw materials of the Paper making Industry have been classified by previous Tariff Boards under the two main heads of

Primary and auxiliary materials. (a) primary materials, i.e., the materials out of which pulp is made, such as bamboo, grass, waste paper and rags; and (b) auxiliary materials, i.e., the chemicals and other materials used in the preparation of pulp and the manufacture of finished paper. We propose to follow the same classification.

(i) Primary materials.

16. (a) *Bamboo*.—Both the Tariff Board of 1925 and the Tariff Board of 1931 found that the supplies of bamboo in areas where the other conditions were favourable for exploitation were sufficient to meet the needs

of all the paper mills in India and to leave a surplus from which an export trade in pulp could be developed. Apart from Assam and Chittagong, seven areas were specified as having been subjected to regular survey, one in Orissa, two in Madras and one in Bombay, from which the estimated yield of bamboo was 291,000 tons, and three in Burma from which the estimated yield was 1,661,000 tons. The following Table shows the estimated quantities of bamboo available in seven provinces and two Indian States in India. No estimate of the quantity available in Burma is available beyond that given in 1931.

TABLE II.

Province.	Tons.	Predominant species.
I. Bengal—		
Chittagong Hill Tracts Kasalong Reserve.	100,000*	<i>Melocanna bambusoides</i> and other species.
II. Assam—		
(a) Cachar Division . . .	10,000	} <i>Melocanna bambusoides</i> .
(b) Sylhet Division . . .	20,900	
III. Bihar—		
Palamau Division . . .	9,000	<i>Dendrocalamus strictus</i> .
IV. Orissa—		
(a) Sambalpur Division . . .	26,154	<i>Dendrocalamus strictus</i> .
(b) Barpahar Division . . .	24,271	Ditto.
(c) Angul Division . . .	18,000	Ditto.
(d) Puri Division . . .	..	<i>Bambusa arundinacea</i> .
(e) Ganjam Division . . .	3,900	<i>Dendrocalamus strictus</i> .

* Old estimates.

TABLE II—*contd.*

Province.	Tons.	Predominant species.
V. Madras—		
(a) Reckapalli Hills (Upper Godavari Division).	20,957	<i>Dendrocalamus strictus</i> .
(b) Papikonda Reserve (Lower Godavari).	5,710	Ditto.
(c) Ramapuram Range (Kollegal) .	17,000	Ditto.
(d) Papanasam Forests (Tinnevely)	25,000	<i>Ochlandra brandisii</i> .
VI. Bombay—		
(a) Dangs (Surat)	10,000	<i>Dendrocalamus strictus</i> .
(b) Kanara	145,000*	Ditto.
VII. Central Provinces—		
Raipur, Balaghat, Chanda, Nagpur, Wardha, Seoni, Bhandara, Melghat, Nimar, Betul, Bilaspur and Saugor Divisions.	27,545	<i>Dendrocalamus strictus</i> .
VIII. Hyderabad State	25,000	Ditto.
IX. Travancore State	25,000	<i>Ochlandra brandisii</i> .
X. Mysore State	50,000	<i>Dendrocalamus strictus</i> .
	50,000	<i>Bambusa arundinacea</i> .
TOTAL	612,537	

* Old estimates.

It will be observed that the quantity of bamboo available from surveyed areas in India exceeds 600,000 tons against an estimate of 291,000 tons in 1930-31. Additional supplies are obtainable from unsurveyed areas for which no estimates are available. Assuming that 2·38 tons of bamboo on an average are required to make a ton of paper, the quantity of bamboo at present required by mills is about 40,000 tons. There is, therefore, an ample margin of reserve supply available for an extension of bamboo pulp manufacture. In Burma, where supplies of bamboo are even more abundant, no paper mills have as yet been established.

The advantage of bamboo as a raw material in comparison with wood is that the cutting rotation is on average 4 years as against 60 years for most species of wood. A disadvantage is that when bamboos seed, they die, and in any given area the supply may be curtailed for a period of 10 years. Bamboos seed 'gregariously' or 'sporadically' and the degree of sporadic seeding varies. Recent investigations indicate that the seeding of bamboos is more gradual than was at one time thought and does not extend to all species simultaneously. Further, the dead bamboo stems remain suitable for the manufacture of pulp for a considerable time which tests have proved to be at least four years. The danger of a shortage of bamboo in any given area in consequence of seeding is not, therefore, considered serious.

The following species have been tested and found suitable for the manufacture of pulp :—

1. *Dendrocalamus strictus* (salia).
2. *Melocanna bambudoides* (muli).
3. *Ochlandra brandisii* (eta).
4. *Bambusa arundinacea* (daba).
5. *Bambusa polymorpha* (kyanthaungwa).
6. *Cephalostachyum pergracile* (tinwa).
7. *Dendrocalamus hamiltonii* (kokwa).
8. *Dendrocalamus longispathus* (orah).
9. *Bambusa tulda* (mitenga).
10. *Teinostachyum dulooa* (dolu).
11. *Oxytenanthera auriculata* (kaliserri).
12. *Oxytenanthera nigrociliata* (bolangi).

The 'eta' reed is considered the best. It is at present used by only one small mill in Travancore State, but there are possibilities of its use in the adjoining areas of Madras in connection with a new Hydro-electric scheme. There are variations in the yield of pulp from the other species, but the differences are not so great as to call for special mention.

Excluding the mill in Travancore, there are at present four mills making pulp from bamboo in Bengal. Their supplies of bamboo are drawn from Bengal, Assam, Bihar and Orissa. Two mills, in order to reduce the cost of transport, are obtaining increased supplies from Bengal itself; the bamboos are slightly inferior in quality, but their use is justified by their comparative cheapness. There appears to us to be a danger that in time these local supplies may be cut out, since there is no systematic regeneration of the felled areas. Some propaganda work by means of leaflets has been carried out with the assistance of the Provincial Government to encourage the planting of bamboo by ordinary cultivators, the results of which are still to be known. As estimate supplied by the Forest Research Institute, Dehra Dun, suggests that the prospects of growing bamboo as a commercial crop are doubtful, but the question, in our opinion, is important enough to deserve much fuller investigation. Supplies are, in the opinion of the mills, adequate for the requirements of both established and new mills, but the increased demand may necessitate the tapping of more distant areas. At present the areas which mills have been able to obtain on lease appear to be adequate, and with systematic regeneration on approved lines no shortage of supply need be feared. Supplies are obtained partly from contractors and partly by departmental working.

17. The Tariff Board of 1925 expected that the cost per ton of air dry bamboo would not fall below Rs. 40 per ton. In 1931

the cost was estimated at Rs. 38 per ton
 Price of raw bamboo. air dry for the purpose of calculating the
 cost of manufacture of bamboo pulp. The

four mills now using bamboo have been able to obtain their supplies at prices between Rs. 14-11 and Rs. 22 per ton delivered at mill. They regard their present costs as the lowest they are likely to reach, because the increased demand may ultimately force them to go further afield for their supplies, thus increasing the cost of delivery at mill. New mills, favourably located for the supply of bamboo, expect to obtain their requirements at prices ranging from Rs. 15 to Rs. 17 per ton delivered at mill and, in one case, at a special concession rate of Rs. 12, but they point out that the lower price of bamboo will be more than offset by the cost of coal and chemicals which have to be transported for long distances.

For the purpose of calculating the cost of manufacture we propose to take Rs. 17 per ton as a fair average figure for the cost of bamboos per ton delivered at mill.

18. (b) *Grass*—is the second most important indigenous material used in India. The species hitherto used for the making of pulp is 'sabai' grass (*Pallinidium angustifolium*) which is grown mainly in the United Provinces, Bihar, Orissa and the Punjab. The available supply was estimated by the Tariff Board of 1931 at 50,000 tons per annum, apart from a considerable quantity in Nepal, no estimate of which was available. Among other species so far tested are munj (*Saccharum punja*), ulla (*Anthistiria gigantea*), dab (*Desmostachya cynosuroides*), bulwa (*Eragrostis elegantula*), khar (*Vetiveria zizanioides*), kans (*Saccharum spontaneum*) and botha (*Andropogon schoenantha*), but none of them have so far been used on a commercial scale. 'Ulla' is considered the most promising, but experiments conducted at the Forest Research Institute so far have given conflicting results on its pulp yield. Two mills are at present experimenting on its use but the results are not yet available. It is hoped that if it is found suitable, any deficiency in pulp yield will be compensated by its comparative cheapness in price, large quantities being available within reasonable distances and little demand existing for its use for other purposes.

At the time of the 1931 enquiry, three mills in Bengal were using grass as their principal raw material. One of these mills is now using bamboo only and the other two partly bamboo and partly grass. Their requirements for grass have thus been considerably reduced and can be met from Bihar and Orissa without the necessity of going so far afield as the United Provinces or Nepal. One mill has succeeded in reconditioning the area under its control in Bihar and so materially improving the supply from 64,000 to 320,000 maunds. Both mills are satisfied that sufficient quantities of grass will be available to meet their requirements even if any of the new mills use grass in addition to bamboo, which is as yet uncertain.

The supply of grass available in the United Provinces is now available for the grass mills located in this area. One established mill which until recently was using considerable quantities of imported pulp, is now concentrating on the use of grass and has

considerably increased its requirements from the Eastern Circle. A reconstructed mill located in the Punjab on the borders of the United Provinces hoped to obtain its supplies from the Western Circle of the United Provinces and from the Punjab States. But it happens that a new mill under construction at Saharanpur in close proximity has obtained the lease of the grass area in the Western Circle. The Punjab mill is therefore, forced to obtain the bulk of its supplies from Nepal at a distance of nearly 500 miles, the cost of transport of which is consequently high. The Government of the United Provinces doubt if the supply of grass in the Western Circle will prove adequate for two mills, the supplies in the Eastern Circle being required for the mill located at Lucknow. If, however, the experiments in the use of 'ulla' grass prove successful, the situation will be considerably improved. Further, we understand that a proposal is under consideration for the systematic planting of sabai grass in waste lands to meet the increased demand. Experiments by the Forest Department in the Kheri district have shown that sabai grass can be grown profitably as a commercial crop on land which would otherwise be waste. Expenditure in the first year is estimated at Rs. 49 per acre and Rs. 5 per acre in the second and subsequent years, representing the cost of weeding. In favourable years yields of 64 maunds an acre have been obtained in an area of 60 acres. Taking 50 maunds per acre as an average yield and a price of Re. 1 to Re. 1-8 per maund, it is estimated that costs should be recovered in the fourth or fifth year and a net return of Rs. 12 to Rs. 15 per acre obtained in subsequent years.

19. The Tariff Board of 1925 estimated that the cost of grass delivered at mill would not fall below Rs. 50 per ton. By 1931 the cost had been reduced slightly below this figure. The cost given by mills varies from Rs. 32 to Rs. 39 per ton delivered at mill. The average figure is Rs. 35 per ton which we consider reasonable and not likely to be further reduced, taking into account the increased competition for the available supply in the United Provinces. Since the suitability of other grasses has yet to be proved, it would be unsafe to forecast any reduction in cost by their use as supplementary to sabai grass.

In considering the availability of sufficient quantities of raw material for the manufacture of pulp we are in agreement with the view of the Tariff Board of 1931 that no distinction need be drawn between bamboo and grass, bamboo being itself a species of grass. Bamboo is the principal material on which the future of the Paper industry mainly depends, but grass as a constituent of paper has a recognised value and will continue to be used in conjunction with other materials as a necessary ingredient in the manufacture of certain classes of paper for which special bulk or tensile strength is required, just as Esparto grass is used by a particular class of mills in the United Kingdom. It is probable that, with improvement in the quality of bamboo pulp, mills which

can obtain supplies of both bamboo and grass, will to some extent substitute bamboo pulp for grass pulp on account of its relative cheapness. But in the United Provinces and the Punjab, where adequate supplies of bamboo are not available, grass will continue to be chief raw material. In our opinion there is a definite place for both bamboo and grass mills and we see no reason why grass mills should be unable to operate economically allowing for the fact that there is a demand for paper manufactured mainly from grass.

20. (c) *Subsidiary materials*.—(1) Waste paper and paper cuttings are used as an ingredient in the manufacture of cheaper classes of paper to a small extent by bamboo and grass mills and to a greater extent by other mills. The quantity used was 5,908

tons in 1936-37. Supplies are obtained by mills through contractors mainly from large towns where sufficient quantities are available for the collection of different qualities. White paper and paper cuttings are in most requirement. Coloured papers are sorted out from the white and used for the manufacture of inferior papers such as badami and brown packing. The price of waste paper varies generally from Rs. 32 to Rs. 75 per ton for inferior qualities and from Rs. 80 to Rs. 150 per ton for superior qualities delivered at mill.

(2) Pulp made from rags, mill cuttings, tailors' cuttings, hemp rope, jute, old gunny bags and waste material from textile mills is used in the manufacture of some qualities of paper. The quantity used in 1936-37 was 8,868 tons. Supplies of rags are obtained usually through contractors. Rags are obtained in three or four different qualities of which tailors' cuttings are the best. The material is sorted according to quality, the better kinds being used as an admixture in pulp for the manufacture of superior classes of paper. The lowest price of old rags white or coloured is from Rs. 30 to Rs. 80 per ton. Better qualities sell at from Rs. 120 to Rs. 240 per ton and the price of bleached new tailors' cuttings may sometimes exceed Rs. 300 per ton delivered at mill. The price of old hemp rope is given at Rs. 45 to Rs. 55 per ton, but better qualities fetch as much as Rs. 110 per ton delivered at mill. Old gunny bags can be bought at prices varying from Rs. 15 to Rs. 38 per ton delivered at mill.

Rags and hemp rope and other paper making materials are sometimes exported, mainly from Bombay and Calcutta: exports in 1936-37 were 1,604 tons, offset by an import of 306 tons admitted duty free.

These subsidiary materials have not hitherto received as much attention as they deserve. In the United Kingdom and other foreign countries wastepaper, rags, etc., are a raw material of great importance to some classes of mills. The collection of the material is a highly organised business. There is a large range of recognised qualities for which regular price quotations are published.

The demand for wastepaper, rags and similar material is likely to increase in India with the opening of new mills. Competition for the available supplies will become keener and prices may be expected to rise. As the trade becomes more highly organised, the collection and sorting of the material according to quality may be expected to provide a not inconsiderable amount of employment for the poorer classes of the population especially in large towns from which the bulk of the supplies will be drawn.

21. (d) *Wood*.—In most countries which make pulp, wood of the coniferous variety is the principal material used. In India,

Wood. forests of coniferous trees—pine, spruce and fir—are available in the Himalayas, but difficulty of extraction and lack of transport facilities, have hitherto stood in the way of the utilisation of wood for the manufacture of chemical pulp. It is doubtful if use can be made of spruce and fir on account of the inaccessibility of the areas in which they grow except in Kashmir State. The possibilities of using pine wood are more promising. We understand that a proposal for the erection of a mill using pine and silver fir wood from Kashmir State is under consideration, a new development which may prove of considerable importance.

It has also been suggested that hard woods of the broad leaved species can be used for the manufacture of mechanical pulp. 17 varieties, which are believed to be available in sufficient quantities, have been selected for trial in a small experimental plant recently put up in the Forest Research Institute at Dehra Dun. At the time of our inspection of the Institute mechanical pulp was in actual process of manufacture from pine wood (*pinus longifolia*), but testing was still in the experimental stage.

22. (e) *Other materials*.—Bagasse, the fibre of sugarcane remaining over after crushing, is at present used as fuel in sugarcane

Other materials. factories. It is used in America as material for the manufacture of boards and wrapping paper and has recently been put on the 'free' list for import into the United Kingdom. Tests are in progress at the Forest Research Institute, Dehra Dun, as to its suitability for the manufacture of insulation and press boards in a recently installed experimental plant. Other fibres tested at the Institute are linseed, straw and sun-hemp sticks for the manufacture of strawboards, and flax tow for the manufacture of better classes of paper, but none have as yet been tried by paper mills.

23. (f) *Imported pulp*.—The question of the use of imported pulp by Indian paper mills was considered at length by the Tariff Board of 1925 and 1931. The criticism was

Imported pulp. made that if it was necessary to import so large an amount of raw material, the claim of the industry for protection on the criteria laid down by the Fiscal Commission was considerably weakened. The contention of the mills was, firstly, that some quantity of imported pulp was essential for the manu-

ufacture of certain classes of paper, and secondly, that it was necessary to keep a reserve of imported pulp as a stand by in case of a shortage of indigenous material or a breakdown in pulp manufacturing plant.

Wood pulp is imported either as bleached pulp ready for admixture with bleached indigenous pulp or as unbleached pulp which requires bleaching along with other material. The chief qualities imported are bleached sulphite pulp, and easy bleaching and unbleached strong sulphite. Small quantities of special kinds of pulp such as aspen and kraft pulp are imported for special lines of paper. One mill imported a small quantity of mechanical pulp as an experiment, but found its use uneconomical.

The following Tables show (1) the total quantities of pulp made from indigenous materials and of imported pulp in each year from 1931-32, (2) the quantities and proportions of different kinds of pulp used by companies in each year from 1931-32 so far as available:—

TABLE III.—*Quantities of pulp made from indigenous materials and of imported pulp used.*

Years.	Bamboo pulp used.	Grass pulp used.	Pulp of other indigenous materials used.	Total.	Imported pulp used.
	Tons.	Tons.	Tons.	Tons.	Tons.
1931-32	5,228	9,049	3,294	17,571	20,981
1932-33	5,429	9,632	2,657	17,718	21,424
1933-34	6,721	11,377	3,769	21,867	20,016
1934-35	9,225	11,340	2,561	23,126	19,737
1935-36	14,441	12,280	3,567	30,288	16,615
1936-37	19,281	11,510	4,583	35,374	10,976

TABLE IV.—Statement showing the quantities of different kinds of pulps used in Indian Mills from 1931-32 and the percentage of each to the total quantity of pulp used.

	Bamboo pulp.	Per cent.	Grass pulp.	Per cent.	Pulp of other indigenous materials.	Per cent.	Imported Pulp.	Per cent.
	Tons.		Tons.		Tons.		Tons.	
1. 'A' Mill—								
1931-32	2,515	41.53	..	..	..	..	2,541	58.47
1932-33	2,478	43.73	..	..	..	..	3,188	56.27
1933-34	2,397	42.10	..	..	..	..	3,198	57.90
1934-35	3,163	53.15	..	..	..	..	2,792	46.85
1935-36	4,747	70.97	..	..	..	..	1,942	29.03
1936-37	4,834	71.69	..	..	..	..	1,909	28.31
2. 'B' Mill—								
1931-32	118	1.93	3,306	34.43	683	6.59	5,544	57.75
1932-33	129	1.17	4,504	40.61	815	7.40	5,562	50.52
1933-34	92	0.84	5,688	51.05	832	7.63	4,415	40.48
1934-35	987	2.47	5,782	53.44	573	5.30	4,197	38.79
1935-36	9,239	15.44	6,303	54.06	1,080	9.50	1,894	16.60
1936-37	2,947	25.30	6,280	53.92	1,269	10.89	1,152	9.89
3. 'C' and 'D' Mills—								
1931-32	2,595	14.50	5,743	32.00	280	1.57	9,277	51.84
1932-33	2,822	15.06	5,198	27.35	357	1.90	10,444	55.70
1933-34	4,302	21.28	5,309	28.73	539	2.66	9,570	47.33
1934-35	5,790	27.46	26,567	26.56	218	1.03	9,518	45.15
1935-36	7,406	31.24	6,676	25.63	131	0.55	10,096	42.58
1936-37	11,500	50.15	5,280	22.81	217	0.93	5,984	26.09
4. 'E' Mill—								
No figures available.								
5. 'F' Mill—								
1931-32	..	..	..	..	2,381*	90.43	252	9.57
1932-33	..	..	..	..	1,435*	80.23	366	19.77
1933-34	..	..	..	..	2,393*	68.60	1,128	32.00
1934-35	..	..	..	..	1,770*	51.98	1,635	48.02
1935-36	..	..	..	..	5,346*	68.06	1,101	31.94
1936-37	..	..	..	..	2,569*	78.21	713	21.79

* Including grass.

The reduction in the use of imported pulp is marked in the case of all established companies but one. This company increased its proportion of imported pulp in the period 1931-32 to 1936-37 owing to difficulties in its grass pulp plant. These difficulties have been overcome and in 1937-38 the company reduced the use of imported pulp to small proportions. We are informed that other companies have made further reductions in the use of imported pulp in 1937-38. Owing to the high price of imported pulp, companies which do not manufacture bamboo or grass pulp have used increased quantities of rags, wastepaper and other subsidiary materials. The total quantity imported fell to below 10,000 tons.

24. The following Table shows the average price paid for Price of imported different qualities of imported pulp in each pulp. year from 1931-32 :—

TABLE V.—*C.i.f. prices per ton of imported pulp.*

Quality of pulp.	1931-32 c.i.f. price per ton.	1932-33 c.i.f. price per ton.	1933-34 c.i.f. price per ton.	1934-35 c.i.f. price per ton.	1935-36 c.i.f. price per ton.	1936-37 c.i.f. price per ton.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Easy Bleaching Sulphite	10 4 2 to 13 9 1	9 1 0 to 12 8 11	8 11 9 to 10 19 2	9 5 3 to 10 2 4	8 14 4 to 10 6 6	9 4 0 to 10 0 7
Strong Sulphite	10 2 6 to 12 8 7	8 12 6 to 11 7 9	8 5 0 to 10 9 1	8 19 4 to 9 9 1	8 13 6 to 10 4 10	8 18 4 to 9 8 10
Bleached Sulphite	12 10 0 to 14 9 11	12 2 6 to 14 16 6	11 6 3 to 14 9 10	10 15 0 to 12 8 9	10 17 3 to 12 7 7	11 18 4 to 12 14 9
Unbleached Sulphite	9 13 9	8 11 0	8 11 10	9 8 1	8 10 0	8 13 9

The imposition of the protective duty of Rs. 45 per ton recommended by the Tariff Board of 1931, increased by the revenue surcharge to Rs. 56-4 per ton, has proved effective in attaining the object in view, which was to force mills to increase the production of pulp from indigenous materials and gradually restrict the use of imported pulp. Raw material in the form of bamboo, grass and subsidiary materials is available in sufficient quantities for the requirements of mills in existence or projected and there are possibilities of bringing into use chemical or mechanical pulp made from wood.

In the following Chapter we shall consider how far the indigenous materials in use have proved satisfactory and economical in the manufacture of paper and to what extent it is still necessary for mills to rely on supplies of imported pulp.

(ii) *Auxiliary materials.*

25. Auxiliary materials consist of the chemicals required for the processes of manufacture of pulp, of the bleaching materials required in the bleaching process and of the chemical and other materials required in the conversion of pulp into paper consisting of 'loading' and 'sizing' materials. A list of the materials used is given in Appendix 'A'.

The principal Indian materials in use are Magnesite, Lime, China Clay, Rosin and Alum. The principal materials which are imported are Sulphur, Caustic Soda, Soda Ash, Saltcake, Bleaching Powder and Dyes.

The following Table shows the total quantities of Indian and imported auxiliary materials used from 1931-32 :—

TABLE VI.—*Total quantities of Indian and imported auxiliary materials used.*

Year.	Indian. Tons.	Imported. Tons.
1931-32	13,347	6,947
1932-33	14,820	6,566
1933-34	16,081	9,046
1934-35	16,495	8,170
1935-36	19,433	9,938
1936-37	21,221	11,998

Though the total quantity of Indian material used has increased, the proportion to imported material has remained much the same.

It is agreed that there has been an improvement in the quality of most Indian materials used which are regarded as, on the whole, satisfactory, if not always equal in all respects to similar imported materials. There appears to be no probability of the replacement of some imported materials such as sulphur and dyes, which are not available in India, but the quantity of these materials used is inconsiderable. In regard to bleaching materials, one company is manufacturing its own bleach partly from Indian material and other companies could do the same. A company has recently been floated for the manufacture of caustic soda and chlorine near Calcutta with the special object of supplying Indian paper mills. Soda ash will also be manufactured by the company at a second factory in Northern India. Another company is, we understand, likely to manufacture caustic soda and bleaching powder in South India. For this reason paper mills are hesitant about the erection of bleach making electrolytic plant, as it may prove more economical to purchase in India from the new companies. When these companies are in a position to produce, it may be expected that the imports of the materials they are able to supply will decrease.

26. Our general conclusion as to the availability of sufficient quantities of raw material for the industry is in agreement with

the conclusions of the Tariff Boards of 1925 and 1931, that the supply of bamboo is adequate for both present and future requirements. The supply of 'sabai' grass for mills operating in North India is at present limited but is capable of improvement, and the possibilities of utilizing other kinds of grass have not as yet been adequately explored. In any case, though grass is a useful material in the production of some classes

of paper where bulk and tensile strength are desirable, it cannot be considered a raw material indispensable to the development of the industry. No estimate can be formed of the supplies of wastepaper, rags and other subsidiary raw materials, but with an increased demand due to the opening of new mills it seems probable that the business of collecting waste material may develop on the lines of wastepaper and rag industries in the United Kingdom and foreign countries and so increase the available supply of material which would otherwise be treated as waste.

The imposition of the protective duty on imported wood pulp has had the effect of reducing its use by 44.9 per cent. in comparison with 1930-31 and a further reduction seems probable with the development and improvement of bamboo and grass pulp producing plants. As regards auxiliary materials consisting mainly of chemicals, the use of Indian materials has increased by 59 per cent. in the period 1931-32 to 1936-37 and is capable of further expansion, so soon as newly formed chemical companies begin the production of material not at present available in India.

The first condition laid down by the Fiscal Commission for the grant of protection to the Industry may therefore be considered to have been fulfilled, an abundant supply of raw material sufficient to meet the requirements of internal consumption for all classes of paper except those made from mechanical pulp. The suitability of Indian varieties of trees other than pine and spruce or fir for the manufacture of mechanical pulp has yet to be proved. Nor can we be certain that if they are found to be suitable they will be available in sufficient quantities in concentrated areas to justify the erection of mills for the manufacture of mechanical pulp. We doubt if the spruce and fir available in the Himalayas can be utilised on a commercial basis on account of their inaccessibility except in Kashmir State. The possibilities of the manufacture of pulp from pine are more promising, though the quantity available in accessible areas is confined to the United Provinces.

But even if the Indian industry is unable to meet the demand for cheap classes of paper made from mechanical pulp, the remaining classes of paper, the total demand for which may be estimated at 90,000 tons, constitutes a wide enough field for the development of an industry sufficiently large to be considered of national importance.

27. We have also considered the question of the establishment of an export trade in bamboo pulp. So far the question has not assumed any practical importance because
 Possibility of export mills have not been able to produce sufficient
 or pulp. pulp to meet their own requirements, and
 until 1937 the price at which chemical wood pulp was available in the world market rendered competition impracticable. The position is now changed. A material reduction has been made in the cost of production of bamboo pulp and the world prices of pulp have risen to a level at which there is a possibility of bamboo pulp entering the world market. A company in Trinidad is already

producing such pulp for export to the United Kingdom, and though it is too early to judge of its success, since it has been operating for less than a year, the fact of its existence is significant. If Indian bamboo pulp can be produced sufficiently cheaply to compete with chemical wood pulp, a market for it may be found in Australia, New Zealand and Japan, all of which countries import considerable quantities of chemical pulp, even if export to Europe is found to be impracticable. If pulp is to be exported, it will have to be dried and pressed into sheets, the form in which imported pulp is received. The cost of treatment has been roughly estimated at Rs. 20 a ton.

CHAPTER III.

Manufacture.

28. At the time of the Tariff Board enquiry in 1931 the manufacture of pulp from bamboo, on which the question of protection for the Paper Industry mainly depended, Developments of pulp manufacture. cannot be considered to have emerged from the experimental stage. The Board, for want of other information, had to base the estimate of the costs of manufacture on the experience of a single mill, the India Paper Pulp Company located at Naihati near Calcutta. The position has now changed. In addition to the India Paper Pulp Company, the Titaghur Paper Mills Company is manufacturing bamboo pulp at both its mills and the Bengal Paper Mill Company is using a proportion of bamboo pulp in addition to grass. We are, therefore, now in a position to make a comparison of cost and to arrive at an estimate of what the cost should be in a representative mill of an average capacity.

Another important development is that while previous Tariff Boards have found that paper could be made from bamboo pulp without the admixture of wood pulp, imported wood pulp was up till 1931 the most important ingredient in paper manufactured by Indian mills. In the India Paper Pulp Mill, the quantity of bamboo pulp used was less than half the quantity of imported pulp. As a result partly of improvements in the process of manufacture of bamboo pulp, but mainly of the imposition of a protective duty of Rs. 45 per ton on imported pulp (increased by the revenue surcharge to Rs. 56.4 per ton) the proportion of imported wood pulp used has been very considerably reduced. Bamboo may now be considered the staple material out of which Indian paper is made. Grass pulp is made in two mills in addition to bamboo pulp and is the principal material used by two other mills. Other subsidiary indigenous materials such as rags and wastepaper are used to some extent by all the mills and to a large extent by two mills which do not make bamboo or grass pulp. In short the bulk of the pulp required by mills is made from bamboo or grass pulp supplemented by other indigenous materials and imported pulp is no longer essential in the sense that ordinary printing and writing paper cannot be made without its admixture.

The following comparative Table shows the progress made since 1931-32 by the three principal Companies who manufacture paper from bamboo or bamboo mixed with grass:—

TABLE VII.

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
" A " Mill—						
Bamboo pulp .	41.53	43.73	42.10	53.15	70.97	71.69
Imported pulp .	58.47	56.27	57.90	46.85	29.03	28.31

TABLE VII—*contd.*

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
"B" Mill—						
Bamboo pulp .	1.23	1.17	0.84	2.47	19.94	25.30
Grass pulp .	34.43	40.91	51.05	53.44	54.06	52.92
Pulp of other indigenous material .	6.59	7.40	7.63	5.30	9.50	10.89
Imported pulp .	57.75	50.52	40.48	38.79	16.50	9.89
"C" & "D" Mills—						
Bamboo pulp .	14.50	15.05	21.28	27.46	31.24	50.15
Grass pulp .	32.09	27.35	28.73	26.36	25.63	22.81
Pulp of other indigenous material .	1.59	1.90	2.66	1.03	0.55	0.95
Imported pulp .	51.84	55.70	47.33	45.15	42.58	26.07

29. In the preceding Chapter we have dealt with the cost of raw material delivered at mill. We shall now proceed to consider Manufacture of pulp the cost of manufacture of pulp beginning from bamboo. with bamboo.

The first stage in manufacture is the crushing or chipping of the raw bamboo into a form suitable for the subsequent processes. This mechanical treatment is necessary in order to disintegrate the fibre and render it accessible to the chemical reagents employed in the process of digestion. The experience of the four mills, who at present manufacture pulp from bamboo, is that crushing in a series of rollers is more satisfactory than chipping the bamboo in chipping machines. One company which is at present using chipping machines is discarding them in favour of crushing machines. On the other hand, another mill which is in process of reconstruction proposes to continue the chipping method which it employed in 1931 with an improved type of chipper.

The next process is the digestion or cooking of the disintegrated fibre which is the chemical process by which the various substances other than cellulose are dissolved. These substances consist mainly of pectins and lignins in several forms. Two processes are in use which may be described as the acid process and the alkali process.

30. In the acid or sulphite process employed by one Company, the chemicals used in the preparation of the acid liquor are sulphur and magnesia which in combination form magnesia-sulphite. The acid liquor is pumped into the digesters loaded with the bamboo chips by the direct overhead method and the temperature slowly raised by the admission of steam under pressure. The digesters consist of a mild steel shell lined with acid resisting brick and are of different capacities. After the cooking is completed, the contents of the digester are blown off into a 'blow pit' from which the spent liquor carrying the non-cellulose material is drained leaving the bamboo pulp behind. It is theoretically possible to

recover a proportion of the chemicals carried over in the relief gasses evolved from the digester, but no recovery plant has yet been installed on account of technical difficulties.

31. The alkali process may be subdivided into two, the soda process in which the principal chemical used is caustic soda, and the sulphate process, an improvement on the soda process, in which sodium sulphide is mixed with a small proportion of caustic soda. One mill only uses the soda process and is contemplating a change to the sulphate process.

The application of the chemicals used can be made in more than one way. The 'fractional' and the 'cascade' methods, descriptions of which are given in the Tariff Board Report of 1931, are those at present in use in India. The average total period of cooking is 14 to 15 hours including washing of the pulp.

The mills using the alkali process have special plants for the recovery of chemicals. The percentage of recovery effected has an important bearing on the cost of pulp manufacture.

32. After the digestion or cooking process is completed and the pulp drawn off from the digesters, the next stage is washing and straining to remove impurities. The pulp is then pumped into a concentrator where the water is extracted and the concentrated pulp passed to a storage chest ready for the process of bleaching.

One company has an electrolytic bleach making plant for the production of bleach. Other companies buy their bleaching material. The material is at present imported, but two companies, one in Bengal and another in Madras, have been formed for the manufacture of the chemicals required and are likely to be in operation within two years.

33. In comparing the cost figures put in by the four mills which at present manufacture bamboo pulp the difficulty arises that as the process of manufacture of pulp and paper is continuous many cost items are common to both. The allocation of proportions of common items such, for example, as power and fuel and overhead charges must necessarily be arbitrary and consequently is not precisely the same in all cases. There is the further difficulty that the four mills do not employ the same process of manufacture and use different proportions of raw material. If, for example, a mill uses a comparatively high proportion of wastepaper, the cost of production is decreased though the realised price will be lower. A comparison of costs must, therefore, be subject to reservations.

In 1924-25 the works cost of manufacture of one ton of air dry unbleached pulp based on the experience of one mill was Rs. 227.47. By 1930-31 this figure had been brought down to Rs. 196.65. The following Table shows the estimated works cost

of four mills as given by them for unbleached air dry pulp in 1936-37, the latest year for which complete figures are available:—

TABLE VIII.—*Unbleached air dry pulp.*

	A	B	C	D
	Rs.	Rs.	Rs.	Rs.
Works cost .	133·45	105·79	127·563	126·181

The average of the four mills is Rs. 123 in round figures, a reduction of Rs. 73 per ton on the 1930-31 figure.

34. The estimated amounts spent on improvements relating to the manufacture of pulp since 1930-31 in round figures have been Rs. 10 lakhs by A mill, Rs. 11 lakhs by B mill, Rs. 12 lakhs by C mill and Rs. 14 lakhs by D. Mill.

The main improvements in A mill have been the installation of new strainers, new digesters and a complete new acid plant and important alterations to the power and water supply plants.

In B mill the expenditure incurred has been mainly on the development of the sulphate process of manufacture, the installation of a massively constructed crusher, new digesters, up-to-date strainers, bleaching towers and a sulphate recovery plant in addition to the improvement of power and water supply plants.

In C and D mills expenditure has been incurred mainly on the installation of the bamboo pulp plant, bamboo crushing and chipping machines, new digesters, strainers and bleaching towers and the extension of the Electrolytic Bleach Making Plant in C mill to meet the increased requirements of both mills. Important extensions and improvements in the power plant have also been effected to meet the requirements of increased production.

In the case of all four mills the additions and modifications of plant have necessitated extensions or alterations of buildings.

Apart from the reduction in the cost of raw material, various economies have been effected in the use of chemicals, power and fuel, labour and supervision and repairs and maintenance. But a final solution of the problem how bamboo pulp can be manufactured in the most satisfactory and economical manner for different qualities of paper has by no means been reached.

'A' Mill has installed an experimental digester for further experimental work on a semi-commercial scale. A new bamboo crusher in course of erection is expected to improve the disintegration of pulp and reduce the percentage of loss which at present is admittedly high, partly because the mill has been using up old stocks of bamboo. Improvements in the process of cooking and bleaching by new methods are also under consideration which it is hoped may result in economies in the expenditure on chemicals and the consumption of coal. An immediate saving in the cost of manufacture of Rs. 25 per ton is expected but a forecast of ultimate savings is at present difficult to make.

In the case of 'B' Mill, no special modifications of plant are in contemplation. The cost of manufacture is already relatively low and no further immediate savings are forecasted.

In 'C' Mill the eventual substitution of the sulphate for the soda process is expected to effect economy in manufacture. In both 'C' and 'D' mills the present 'recovery' plants are admitted inadequate and unsatisfactory and the percentage of recovery abnormally low in comparison with standard percentages. Probable savings in chemicals and in the consumption of coal are estimated to amount to Rs. 9.4 per ton. Deducting savings in the cost of manufacture expected from the rectification of admitted defects, the average cost of manufacture would amount to Rs. 111 per ton.

35. It is a matter of considerable difficulty to forecast what further reductions in the cost of manufacture are possible in the next few years. As regards raw material the cost has already been brought down to a level at which it will be difficult to effect further economies. Though the supplies of bamboo available are adequate for the requirements of existing mills in Bengal, the opening of new mills will increase the general demand for bamboo. There is no danger of a shortage, but it is possible that some mills may have to go further afield for part of their supplies as a result of which the cost of transport will increase. On the whole, we are inclined to doubt if any further reduction in the cost of raw material is possible.

On the question of power and fuel, it has been pointed out to us that the price of coal has increased by Rs. 2 to Rs. 3 per ton in 1937-38, and that the inevitable increase in the cost of power must raise the cost of production in spite of economies effected by electrification consequent on the installation of improved power plants. We have also been informed that the present tendency in the price of chemicals is in the upward direction. It should, however, be mentioned that the opening of two mills for the manufacture of material required for bleaching may in two or three years time enable mills, which at present buy their bleaching material from abroad, to obtain their supply more cheaply in India. It is, of course, impossible to say what the level of prices will be in the next few years. The present rise in the price of coal and chemicals may be only temporary, but it would be unsafe to forecast any reduction in price below the 1936-37 level.

As regards the question of general efficiency, it may be said on behalf of the mills that India has been the pioneer in the manufacture of bamboo pulp and has not had the advantage of the experience of other countries. The properties of bamboo as a raw material for the manufacture of pulp are not precisely the same as those of wood extracted from trees of the coniferous variety since bamboo is a species of grass and not a species of wood. Though the manufacture of bamboo pulp has emerged from the experimental stage, it has not yet reached the level of mechanical and chemical

efficiency attained in the manufacture of wood pulp based on the experience of many countries over a long period of time. From this point of view it may be said that the room for improvement in the manufacture of bamboo pulp of different qualities suitable for different kinds of paper is still considerable.

36. Taking together established mills and new mills who will use bamboo or bamboo and grass as their raw material, 6,000 tons may be assumed to be the capacity of an average mill. In a mill of this capacity, assuming that Rs. 17 per ton is the cost of bamboo and that 2.27 tons of bamboo are required to make a ton of pulp, the works cost per ton of bamboo pulp may be estimated at Rs. 111.

Estimated cost of pulp manufacture in mill of average capacity.

We shall deal with the question of overhead charges in a later section. Assuming the capitalised value of a mill of 6,000 ton capacity in present conditions to be Rs. 680 per ton and allocating overhead charges in the proportion of 60 to the manufacture of pulp and 40 to the conversion of pulp into paper, as estimated by the three companies in a joint memorandum submitted to us, average overhead charges per ton of pulp may be taken to be Rs. 33. As thus calculated the total cost of air dry unbleached bamboo pulp may be estimated at Rs. 144 per ton.

37. Until comparatively recent years grass was the principal indigenous material from which pulp was manufactured in India and is still of definite importance. Two of the mills which now manufacture bamboo

Manufacture of pulp from grass.

pulp continued in 1936-37 to manufacture pulp from grass in one case in the proportion of 2 to 1 and in the other case in equal proportions. Two other mills use grass as their principal indigenous material and a third mill has recently experimented in the manufacture on a small scale.

The grass is first dusted and then loaded into digesters. The process of digestion or cooking of grass is carried out in one operation at a constant pressure with sodium hydroxide either by the direct overhead or by the 'fractional' system. The pulp after digestion is broken up, strained, washed and bleached.

38. The works cost of manufacture per ton of air dry unbleached pulp was estimated to have fallen from Rs. 256.93 in 1924-25 to Rs. 156.97 in 1930-31 in the case of one mill. Cost of manufacture. and from Rs. 214.53 in 1924-25 to Rs. 183.84 in 1930-31 in the case of a second mill. The same two mills have supplied us with estimates of the cost of manufacture in 1936-37 amounting to Rs. 145 and Rs. 148 per ton respectively. These two mills use both grass and bamboo in the manufacture of paper. Two other mills which use grass only have supplied cost estimates. One mill, which has recently renovated its pulp plant, estimates the total cost of bleached pulp approximately at Rs. 208. Deducting the cost of bleaching the cost will be Rs. 184. The estimated cost of grass is high and should be capable of reduction. We do not think that its total cost should exceed that of the other two

mills. The second mill has given the total cost of bleached pulp as Rs. 251-13, but failed to supply us with details in time for our consideration. The estimate is so high in comparison with the estimates supplied by other mills, that we are unable to accept the figures.

Assuming that Rs. 35 per ton is the cost of grass and that 2·21 tons of grass are required to make a ton of pulp, the works cost per ton of unbleached grass pulp may be estimated at Rs. 140. Allowing Rs. 33 for overhead charges, the total cost of air dry unbleached grass pulp may be estimated at Rs. 173 per ton.

39. *Wastepaper and paper cuttings.*—Wastepaper and paper cuttings are used for admixture with other pulp for the manufacture

Manufacture of pulp from wastepaper, rags and other subsidiary materials.

of cheaper qualities of paper. The proportion used by mill varies according to the qualities of paper manufactured. In mills which use mainly bamboo or grass pulp the proportion per ton of paper made varies from

below one per cent. to over 6 per cent. and has, on the whole, tended to increase slightly. In mills which do not use bamboo or grass pulp the proportion is higher.

The process of manufacture is to sort the paper by hand and pulp it in mechanical rotary pulpers. Heavily coloured papers are sometimes boiled in rotary digesters with a weak solution of caustic soda.

Rags (including hemp, jute and canvas).—The proportion of pulp made from rags in mills which use mainly bamboo and grass pulp is very small and is below one per cent. per ton of paper. The rags and similar materials are sorted, cut into small pieces and dusted. They are then boiled in rotary digesters in a caustic soda solution at a low pressure. After boiling the materials are washed and bleached.

No attempt has been made to estimate the cost of manufacture of pulp from the different subsidiary materials used in bamboo and grass mills. The quantity is so small that the allocation of general charges is a matter of difficulty. One mill, which manufactures paper mainly from rags and wastepaper, has estimated the works cost of bleached pulp made from rags at Rs. 198·66 per ton and the total cost including overheads at Rs. 229·37. These figures are comparatively high, because the cost of power and fuel at the mill is above the average, as it is unfavourably situated for the supply of coal. Improvements in the power plant and other alterations which have been carried out should enable the mill to manufacture more cheaply.

40. Having concluded our examination of the production of pulp from different raw materials, we pass to the manufacture of paper from pulp. After completion of the process of bleaching, the bleached pulp is passed to the beating house. If imported bleached pulp is used, it is added at this stage. The process of beating is of great im-

portance since the quality of the paper made depends largely on the attainment of the correct degree of consistency in the pulp. The length of time required for beating depends on the nature of the material from which the pulp has been made. Speaking generally, the beating house plant in use at mills is old and somewhat out of date. Most mills are alive to this defect and are installing or about to instal more modern equipment with a larger capacity.

After beating the pulp is passed through the paper machine to emerge finally as paper. No special description of the final process is necessary as it is the same in all mills, though different types of machine are in use. Much of the machinery employed is comparatively old if not obsolescent, and improvement in the quality of paper is to some extent dependent on replacements by new and up to date plant. Two companies have recently installed new machines of the more modern type. Other companies have deferred replacing their machines pending the completion of the more urgent requirements of their pulp plant, but have the matter in view. Most mills have, however, effected a number of minor improvements such as the introduction of Bewoid sizing plants, calendering and super-calendering machines, new cutting and reeling machines, 'Guillotines' for trimming and splitting of paper in reams, and ruling machines. In the matter of power, the general tendency is to substitute electric drive for the machines, which should have the effect of improving efficiency. On the whole, mills must be considered not up to date in their paper making plant, but we realise that the first necessity was to concentrate on the extension and improvement of their pulp making plant, and that there was difficulty in carrying out improvements in all sections simultaneously.

41. In 1936-37 the costs of production of paper of the protected classes as given by the three principal companies were as follows:—

TABLE IX.

	A Mill.	B Mill.	C and D Mills.
	Rs.	Rs.	Rs.
Works cost	294.29	256.44	288.65
Overhead charges	77.51	72.52	70.13
Total	<u>371.80</u>	<u>328.96</u>	<u>358.78</u>

In a joint memorandum the three companies have given an estimate of the cost of production in an average bamboo mill as follows:—

	Rs.
Works cost of bleached pulp	140
Conversion	140
	<u>280</u>

Our estimate of the average cost of unbleached pulp is Rs. 111 per ton. Adding Rs. 20 as the cost of bleaching, the works cost of bleached pulp will be Rs. 131.

We accept Rs. 140 as a reasonable estimate of the cost of conversion which is lower than the figure taken by the Tariff Board of 1931. The 'spread' between the cost of pulp including overheads, and the final cost of paper does not seem to us excessive in comparison with the 'spread' in British or Continental mills, taking into consideration the fact that Indian mills manufacture a wider range of papers and losses are incurred in changing from the manufacture of one class of paper to another.

According to this calculation, Rs. 271 may be taken as the total works cost of finished paper in an average mill of 6,000 ton capacity. We desire to explain that the allotment of costs to the different stages of manufacture, pulp bleaching and conversion into paper is necessarily arbitrary, because the process of manufacture from raw bamboo to finished paper is continuous and an exact computation of cost items debitable to the different stages is not possible.

Overhead charges are calculated by the Companies on the basis of a capitalised value of Rs. 800 a ton, the figure adopted by the Tariff Board of 1931. In present conditions this estimate appears to us to be high. The capacity of established mills and mills under construction varies from over 11,000 tons to 3,000 tons per annum. A mill with a capacity of 6,000 tons may be considered an average mill. We have received varying estimates of what the block value of such a mill should be. Estimates supplied by the Companies who are constructing new mills, based largely on actual costs, have been of great assistance to us. On the information we have obtained we consider that the cost of construction of a fully equipped mill using the sulphate process, which is the process employed by two of the four established mills and the process which all new mills propose to use, may reasonably be estimated at Rs. 40-41 lakhs equivalent to Rs. 680 per ton in round figures.

42. In estimating the future works cost of an average mill we have first to determine what proportion of imported pulp is required. Use of imported pulp. in present conditions and what reduction is probable in the near future.

Foreign wood pulp is prepared by four different methods, one of which is mechanical and the other three chemical. Mechanical pulp is prepared by grinding wood of the coniferous variety under hydraulic pressure against the face of a revolving grindstone. The fibre is then washed and screened. 'Ground wood' thus produced contains all the wood substance, a part of which is not durable. The fibres are generally shorter and weaker than fibres prepared by the chemical process, having been broken in the process of manufacture. 'Ground wood' is used mixed with chemical fibres for newsprint, wall, cheap printing, manilla, tissue and wrap-

ping papers and for some kinds of boards. Mechanical pulp is not at present imported into India for use in mills.

The chemical processes are the sulphite, sulphate or kraft, and the soda, of which the sulphite and sulphate are the most important. The soda process is the oldest of the three processes, but has now been mainly superseded. Apart from its use for paper making, the best quality of bleached sulphite pulp is used in the manufacture of artificial silk. The sulphate or kraft process is a comparatively recent modification of the soda process, but has made a considerable advance in recent years.

For export purposes wood pulp is thickened sufficiently to allow it to be formed into sheets and folded into bundles or 'laps' which are pressed and baled by hydraulic process. The kinds of wood pulp most commonly imported in India are Easy Bleaching Sulphite wood pulp, Strong Bleachable sulphite wood pulp and bleached pulp. Special qualities of pulp such as aspen and kraft are imported in small quantities.

With the imposition of the protective duty on imported pulp and a reduction in the cost of indigenous pulp made from bamboo or grass, it has been more economical for mills to use indigenous pulp than imported pulp, but the pulp making capacity of mills has not hitherto been equal to their paper making capacity. Partly for this reason and partly because an admixture of imported pulp is considered at present necessary in the production of some classes of paper such as antiques, typewriting, and bank papers, all mills continue to use some quantity of imported pulp though the proportion has tended to decrease steadily. The quantity used in the four mills manufacturing paper from bamboo pulp or bamboo and grass pulp combined has fallen from 18,362 tons in 1931-32 to 9,045 tons in 1936-37 and to 7,608 tons in 1937-38.

There is general agreement among mills that there is room for further reduction in the use of imported pulp. One mill using bamboo and grass pulp as its main material had by 1936-37 reduced the proportion below 10 per cent. and made a further reduction in 1937-38. It is also agreed that, with further improvement in the quality of bamboo pulp, it should be possible ultimately to dispense with the use of imported pulp even in those qualities of paper for which an admixture of imported pulp is at present considered necessary.

There remains the question of how far it is necessary to keep a reserve of imported pulp as a stand-by in case of a temporary shortage of indigenous material or a breakdown of pulp making plant. We have examined mills on the question of the extent to which it is possible to keep a reserve of indigenous pulp against possible eventualities. So far they have not been able to manufacture pulp in excess of their requirements, so the matter has not, as yet, been seriously considered. It is thought that moist bamboo pulp might keep for a period of three months in good

condition, but would be likely to deteriorate if kept for a longer period. If pulp were required to be kept for long periods, the necessity would arise to dry and press it in the form in which foreign pulp is imported. No experiments have as yet been made on the keeping quality of bamboo pulp. The question, in our opinion, is deserving of investigation at the Forest Research Institute. For the present we must assume that a small reserve of imported pulp is still necessary as a stand-by.

The average proportion of imported pulp used by bamboo mills in 1937-38 did not exceed 20 per cent. By the end of a further period of protection this proportion should be reduced to 5 per cent. We shall assume an average of $12\frac{1}{2}$ per cent. Other mills which use rags or waste paper as their main materials may require a higher proportion of imported pulp, but we do not consider ourselves justified in taking their requirements into consideration as the case for protection of the industry depends primarily on the use of bamboo and grass as raw material.

43. For the purpose of determining the protective duty on imported pulp the Tariff Board of 1931 took into consideration the cost of manufacture of bamboo pulp by the India Paper Pulp Company which was at the time Rs. 196 per ton. As the cost of manufacture was considered high, a deduction of Rs. 10 per ton was made and Rs. 186 taken as a fair estimate of the works cost of manufacture. The cost of imported easy bleaching sulphite pulp was taken as £10 per ton c.i.f., Calcutta and on this basis a protective duty of Rs. 45 per ton was recommended. The cost of production of grass pulp was not taken into account, presumably because the cost of production of bamboo pulp was higher and, therefore, the protective duty proposed for bamboo pulp covered grass pulp as well.

The position is now changed. The cost of production of grass pulp is higher than the cost of production of bamboo pulp and consequently a protective duty based on the cost of production of bamboo pulp will not be sufficient to protect grass pulp. Assuming that some proportion of pulp other than bamboo pulp is necessary for the manufacture of paper, it is *prima facie* desirable that pulp made from indigenous raw materials, which cannot be utilised for any other purpose, should be used in preference to imported pulp. We, therefore, consider that we are justified in taking into consideration the cost of manufacture of grass pulp as well as bamboo pulp in determining the amount of protective duty required.

For the purpose of comparison between the cost of production of pulp and the price of imported pulp the correct criterion is not the works cost of production, but the total cost including overhead charges since the price of imported pulp includes both.

The following Table shows the course of prices of pulp from the beginning of 1936 till February 1938. These prices are c.i.f. prices

at ports in the United Kingdom and £1 a ton should be added for the freight to India to obtain the c.i.f. price Calcutta.

TABLE X.—*Prices of pulp from January 1936—February 1938.*

	Bleached Sulphite pulp.		Easy Bleaching Sulphite pulp.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
5th January 1936	10	0 0 — 10 15 0	7 15 0 — 8 0 0	
21st February 1936	10	11 0 — 11 0 0	8 0 0 — 8 10 0	
24th April 1936	11	10 0 — 12 0 0	8 10 0 — 8 12 0	
5th June 1936	11	10 0 — 12 0 0	8 15 0 — 9 0 0	
4th September 1936	12	0 0 — 12 10 0	8 15 0 — 9 0 0	
9th October 1936	12	10 0 — 12 15 0	9 5 0 — 9 7 6	
20th November 1936	13	0 0 — 13 10 0	10 0 0 — 10 10 0	
25th December 1936	13	10 0 — 14 0 0	11 0 0 — 11 10 0	
8th January 1937	14	10 0 — 15 0 0	11 10 0 — 12 0 0	
29th January 1937	14	0 0 — 15 10 0	12 5 0 — 12 19 0	
12th February 1937	15	0 0 — 15 10 0	12 10 0 — 13 0 0	
19th February 1937	16	0 0 — 16 10 0	13 17 6 — 14 2 6	
12th March 1937	17	0 0 — 18 0 0	15 0 0 — ..	
2nd April 1937	17	10 0 — 18 10 0	16 10 0 — 17 10 0	
21st May 1937	19	10 0 — 20 10 0	17 0 0 — 18 0 0	
9th July 1937	19	10 0 — 20 10 0	17 10 0 — 18 10 0	
3rd September 1937	19	10 0 — 20 10 0	17 10 0 — 18 10 0	
17th September 1937	19	10 0 — 20 10 0	17 10 0 — 18 10 0	
22nd October 1937	19	10 0 — 20 10 0	17 10 0 — 18 0 0	
26th November 1937	19	10 0 — 20 10 0	17 10 0 — 18 0 0	
17th December 1937	18	0 0 — 19 0 0	16 10 0 — 17 10 0	
21st January 1938	18	0 0 — 19 0 0	16 0 0 — 17 0 0	
28th January 1938	18	0 0 — 16 0 0	.. — 15 0 0	
4th February 1938	15	10 0 — 16 10 0	14 0 0 — 14 10 0	
11th February 1938	15	0 0 — 16 0 0	13 0 0 — 14 0 0	
18th February 1938	15	0 0 — 16 0 0	12 0 0 — 13 0 0	

It will be observed that fluctuations in prices have been wide. Quotations for easy bleaching pulp, for example, rose from £7-15 to £18-15 and later fell to £12. We understand that prices even lower than £12 have been quoted recently. By 1939-40 it is not improbable that a further fall in prices may have occurred, and it is possible that they may eventually recede to £9 a ton c.i.f. Calcutta since early in 1936 they were as low as £8-15. Taking a c.i.f. price of £9 a ton Calcutta and adding landing and other charges, the lowest price of imported pulp delivered at mill is Rs. 126 per ton. We have found that the average cost of production

of bamboo pulp is Rs. 144 per ton. The measure of protection required for bamboo pulp would be Rs. 18 per ton as against Rs. 47, the measure of protection required for grass pulp. Grass pulp is an important ingredient in the manufacture of paper, whether mixed with bamboo pulp, as in two mills in Bengal, or ~~used by itself as in two mills in Northern India. If the notes,~~

with an irresistible love of fair play, and a sound conviction that it was not only our Christian duty but our

CHRISTIANITY AND GOVERNMENT OF INDIA

create any dangerous antagonism or to raise prematurely any awkward questions ; even the addition of a Presbyterian chaplain to the meagre establishment of each Presidency gave rise to little anxiety, and the most nervous critics were disarmed when the first Presbyterian chaplain announced openly that the conversion of the Hindu was in his opinion a hopeless task.

The see of Calcutta proved in fact a veritable death-trap. The extent, variety, and delicacy of the work, and the rigour of constant touring, under conditions far harder than those of to-day in every kind of climate, brought several careers of great promise to an abrupt close. The fact that seven bishops of Calcutta died at their posts between 1813 and 1833 was largely responsible for the substantial extension of the episcopal in the latter year.

Of the first bishop, Middleton¹, it may without injustice be said that he did not let the claims of Christian missions or their converts weigh heavily on him. Lord Teignmouth's prophesy that the episcopal invasion would be greeted with profound indifference was correct. When he landed in Calcutta, 'without éclat, so as to avoid any popular disturbance', 'the heart of India beat calmly as was its wont'. His wish to avoid any disturbance of the unruffled surface of India led to the emphatic dissociation of his office from the Bible Society and every form of mission work for a time. But disciplinary zeal made his relations to the Church of England missionaries a question of considerable anxiety and importance. 'These C.M.S. missionaries ! I must license or silence them !' The S.P.G. mission, as an official organ of the Church, presented less difficulty. His attitude to this mission, and the Bishops College scheme, after a letter of commendation from the Prince Regent, was almost

¹ Thomas Middleton, F.R.S. ; Prebendary of Lincoln ; first Bishop of Calcutta, 1814-1820.

cordial. But for the most part he was engaged, not ineffectively nor altogether unprofitably, in maintaining the dignity of his office and establishing an episcopal tradition. With a Presbyterian chaplain devoting much of his time to the claims of his church there were always questions of precedence that demanded painful attention. The comparative height of church steeples opened up a vast field of controversy. Of what use to the prestige of the Church of England was a higher steeple, if a weathercock, abnormally elevated with diabolical dexterity, proclaimed to every dawn the ultimate triumph of the Scotch Kirk !

No one could have adapted more skilfully the functions of the post to the Indian conception of what a Lord Padre Sahib ought to be. Here was dignity and repose and a genial atmosphere of 'Live and let live'. India liked its rulers to have their own Guru. It fitted in with their idea of sovereignty. The Government had its own priesthood, and it continued to administer with simple impartiality and wonderful efficiency the affairs of countless mosques and temples for which it was trustee ; it honoured the religious endowments which it had taken over from Hindu and Mohammedan predecessors as punctually as it paid the episcopal salary. Brahmin, moulvie, bishop, and archdeacon met on terms of perfect equality, all alike interested in questions affecting 'the establishment'. 'I too am a Brahmin', said a discredited but self-satisfied Raja to Bishop Heber, who had expressed surprise at the courtesy of his reception. 'In token of his brotherly regard, he plucked some of his prettiest flowers for me.' Heber was approached more than once by Brahmins anxious to discuss with him the best methods of safeguarding common privileges. 'We must stand together', as the manager of a richly endowed temple remarked. During his many tours the episcopal cortège was often augmented and delayed by

CHRISTIANITY AND GOVERNMENT OF INDIA

a following of suppliants, who threatened to die of starvation before his tent unless their demand for 'chits' of recommendation from the Governor-General's Guru was satisfied.

But Heber, during his all too short ministration, had time for other matters also. Without fear, and equally without indiscretion, he put evangelisation first among his many duties. His first task in visiting any station was to investigate, stimulate, and not seldom correct the local mission work. Many and important were his decisions. We shall come on traces of his work soon in the great questions of caste. He was president of the C.M.S. committee and called himself openly the first missionary of the Society. His prayer for the final conversion of the Raja of Tanjore, Schwartz's affectionate but not finally secured pupil, was circulated for use in all Anglican places of worship. It is surprising and creditable to the authorities that in an age when they were, according to Heber, so 'cowardly and lukewarm' they should have tolerated without a protest such action on the part of one with whom they were so closely associated. Probably they understood and appreciated the discretion with which Heber's zeal was always tempered. There was nothing of the fanatic in him. He regarded the maintenance of the British empire as essential for the evangelisation of India. And nothing, not even the prohibition of such a ghastly business as suttee, could be approved if it involved a risk to that Empire. He was far from sharing the view of the British official who optimistically described the procedure as 'a light affliction working for the widows an exceeding weight of glory'. But, like so many of his contemporaries he underrated the Indian respect for strength allied with justice. Our Indian Empire, he thought, was in imminent danger and could be sustained only by official deference to all old-established customs. His orders

against street preaching were precise and emphatic. We are left wondering what St. Paul's reply would have been to such orders from Jerusalem. We know what the Roman official thought and did, and the wholesome fear inspired at Ephesus by his orders. It was perhaps the Government more than Heber that deserved reproach for cowardice.

The other great Bishop of the period, Daniel Wilson, during the many years of his episcopate, followed Heber in his zealous care for missionary work. Like him too he was both fearless and discreet. But he was not like him over-anxious for the security of our Empire. Perhaps he was familiar with Dryden's great words, 'I have heard indeed of some virtuous persons who have ended unfortunately, but never of any virtuous nation ; Providence is engaged too deeply when the cause becomes so general'. Acting on the principle that 'Righteousness exalteth a nation' he was constant in admonition when he thought unmeaning concessions were made to timidity. He placed more than one official rebuff to his credit, and we shall find him foremost among those who openly attacked the exclusion of the Bible from Government schools.

Men of the calibre of Heber and Daniel Wilson, backed by the authority of the Church and firmly entrenched in a position secured by public opinion at home and the express will of Parliament, could not fail to leave their mark on the Government of India. They were ably backed by chaplains, such as Thomason and Corrie, who owed their original inspiration to Simeon, and were worthy successors to Daniel Brown and Claudius Buchanan. So far indeed as outward observance of religion and reasonable provision for adequate and decent ministration to Europeans were concerned the bishop and his establishment cannot have found their task difficult. Bentinck and Dalhousie were not men

CHRISTIANITY AND GOVERNMENT OF INDIA

who were likely to forget, among their manifold duties, the respect that the Government owed to the Christian religion. Even Lord Ellenborough, whose nervous preoccupation with the explosive potentialities of all religion will engage our attention later, was punctilious in his official recognition of the necessity for divine assistance. After the victorious campaign against the Afghans in 1842 he reminded the official world in a dignified proclamation of 'the duty of humble thanksgiving to Almighty God imposed on us all, and of prayer that we may not abuse His bounty and that we may be made fit instruments for the government of the great nation which His wisdom has placed under British rule'. At the beginning of our period the construction of 'a few cheap chapels' seemed to the Directors all that was required for the purpose of the modest establishment imposed on them by Parliament. But, though a Christian government in India had never even tried to rival the pious munificence of its Hindu and Mohammedan predecessors, the period as a whole is one of considerable activity in church building. And from 1833 onwards the establishment of chaplains was substantially increased and the Directors' tendency to save money by long delay in the filling of vacancies was corrected. The principle enunciated by Heber at the beginning of the period was effectively impressed by Dalhousie on the official world before its close. The Hindu and Mohammedan communities found it easier to respect a Government which made decent provision for its own religion. Such provision showed that their rulers were not only strong and resolute but also human and generous. And these are characteristics dear to the Indian world.

The Government, in so far as it was determined to profess and call itself Christian, and we shall have to note later on the restrictions imposed by timidity or

inevitable conditions on this resolve, found at its disposal many of its servants who were eager to co-operate. Of Anglo-Indian society generally we shall have more to say later. The evidence is conflicting. But testimony is unanimous as to the stalwart and manifest Christianity of such men as the Lawrences, James Outram, Herbert Edwardes, Mountstuart Elphinstone, Robert Grant, and James Thomason, Bartle Frere, Montgomery, McLeod, and Thornton, Muir and Durand.

All these and others, most of them Governors or Commissioners of Provinces, proved themselves 'bold, independent and yet Christian rulers, uncrowned kings of men by grace and election'.¹ 'They considered themselves Governors-General at least', is typical of the criticism urged against them. Many of their actions indeed seem even at the present day bold and uncompromising. To the supreme authorities, with their fear of popular disturbance, they were often most embarrassing. But there was nothing soft or sentimental in their composition. Their respect for law and order as imperial aims was Pauline in its intensity. Their will was indeed law and in few areas where they had predominated was there any serious trouble in 1857. Hindu and Mohammedan alike were confident that men who advocated their own religion with such transparent honesty were honest also in their undertaking to protect all religious practices that were harmless to the community as a whole.

'Methodism at home is no unprofitable game. In the East it will soon be the infallible road to promotion.' The prophetic grumbler in the *Edinburgh Review* of 1808 was right. But the methodism that triumphed in the men who consolidated our Indian possessions and retained them for us in 1857 was a quality of character

¹ Contemporary verdict quoted in Smith's *Twelve Indian Statesmen*.

CHRISTIANITY AND GOVERNMENT OF INDIA

not the snuffling cant which is wrongly connected with the term. Lawrence and Edwardes were bound to 'get on' not because they were 'Methodists', they were in fact orthodox Churchmen, but because of their clear grasp of essential principles and their courage in applying them. 'We are much safer', said Edwardes, at a time when men's hearts were failing them for fear, 'if we do our duty, than if we neglect it.' 'We must endeavour solely', wrote John Lawrence to the Government of India, 'to ascertain what is our Christian duty and follow that to the uttermost, undeterred by any consideration. . . . Christian things done in a Christian way will never alienate the heathen.' And later he pleaded for open avowal of Christian intentions 'so that the people may see that we have no sinister or sudden designs'.

Such men were openly interested in the work of evangelisation and regardless of the disapproval and mistrust that such interest inspired in their superiors and subordinates alike. Shortly after the advance to Peshawar Colonel Mackenson, who was in charge of the recently acquired area, announced that no missionary should cross the Indus while he was commissioner. 'Do you want us all to be killed?' he said to a major who represented the mission. A few weeks later he was murdered by an Afghan. Edwardes, his successor, approached by the same representatives, replied, 'Certainly! send for a missionary, call a meeting and I will preside'. The date fixed for the meeting was also set apart for a steeple-chase. Refusing any postponement on this account, in his opening speech he enlarged on the need for a mission not to the minds and bodies but to the souls of men and emphasised the claim that missionaries of all religions had on the protection of Government. In the face of ridicule and opposition he proceeded. One of his subordinates derisively subscribed a rupee towards a

revolver for the first missionary. But Pfander,¹ who preached and argued openly in the most fanatic areas of Peshawar throughout the Mutiny, needed no revolver. There was that in Edwardes that endeared him to a man like Ruskin, who has left his impressions of him in 'a Knight's Quest'. Donald McLeod, who rose to the Lieut.-Governorship of the Punjab, as a junior officer in a remote district in 1833 recorded officially his view that our deeds, by which he referred to the government patronage of idolatry, must be viewed at the throne of God as deserving of divine vengeance. James Thomason, who reached similar rank, openly worshipped with converts of humble rank, translated the Psalms into Hindustani, and announced, while opening a government college in his official capacity as head of a province, that he looked forward hopefully to the christianisation of India. He took a leading part in the foundation of the mission college in Agra and proved himself in every way the son of the devout chaplain and godson of Simeon.

We read of a Governor of Bombay who held a Sunday school class. Attendance of officials at the public baptism of converts and at public disputation between missionaries and pandits was not uncommon. At a time when public feeling in Bombay was exasperated a police commissioner on his own responsibility safeguarded the baptism of six Parsee converts. A memorial to the C.M.S. urging intensive work in Bombay was signed by a Commissioner of Scinde, sixteen civilians of high standing and twenty-three military officers. 'Arise, for this matter belongeth unto thee. We also will be with thee.'

In Bombay particularly, but in other parts to a less degree, government servants contributed liberally to missions. We find military officers in the British Army

¹ Representative of the C.M.S.

CHRISTIANITY AND GOVERNMENT OF INDIA

urging privates and non-commissioned officers to subscribe. The victorious army in the Punjab raised a subscription for the C.M.S. as a thanksgiving. Residents in native states such as Nagpur, Assam and Kathiawar invited missions to establish settlements. The Political Commissioner of Baroda accompanied John Wilson, when he expounded the Christian faith to the Gaekwar, and 'took the chair' when he argued with the Court pandit. The Gaekwar was kind enough to congratulate Wilson on his Marathi accent. As for himself, his business was with this world, not the next. But he was pleased to accept the gift of a Bible through the Political Commissioner. For their interest in his welfare he thanked this intelligent Padre and his commissioner colleague. So different from the Lord Padre Sahib 'who always asks to see the artillery'.

The Bayard of India, Outram, was fearless in religion and in war alike. Convinced that our past war policy in Scinde was radically unjust, he offered his prize-money to Lord Ellenborough as compensation to the dispossessed Amirs of the land. A Gibbon would show us the apprehensive Proconsul applauding the chivalry, but deploring the enthusiasm, of the action. His actual words are, perhaps fortunately, not recorded. The prize-money was eventually handed over by Outram, as the price of blood, to a Christian mission.

Stouthearted merchants too were not found wanting. In 1845 they gave Duff £1000 for his Calcutta work. And there were Government chaplains whom no episcopal caution could restrain from mission work. Thomason and Corrie, usually known as 'the black chaplains', remembered the instructions given to the Company's pastors in 1698, and were able to give some of their best to India without stinting their European ministrations. Another chaplain, James Grey¹ 'of

¹ For further account see Smith's *Life of John Wilson*.

HEBER, DUFF AND WILSON

Bhooj', devoted the last four years of his life to the edification of the raja of that principality and his Gujarati subjects. It was under his influence that slavery and infanticide were suppressed within the State. There was something of a Schwartz about him. A shoemaker at the outset of his life, friend of Burns, correspondent of Wordsworth, contributor to *Blackwood*, and persevering orientalist, he has strangely failed to win a place in the *Dictionary of National Biography*.

CHAPTER X

ADVANCE ON CHRISTIAN LINES BENTINCK AND DALHOUSIE

Significance of Bentinck and Dalhousie—their supporters—suppression of suttee—campaign against superstitious malpractices—Thuggee and infanticide—remarriage of widows—slavery and the penal code—the civil rights and status of Indian Christians—schools for Christian sepoys—marriage of Indian converts—the conversion of minors—treatment and employment of outcastes—opposition to employment of Christians.

THE individual efforts of men such as we have described in the preceding chapter must not be regarded as embodying the explicit policy of a responsible Government. We shall have indeed to record later the periodic attempts of that Government to curb their enthusiasm and to discountenance any idea that the Government as such took any interest in the evangelisation of India. But the clear convictions of such agents encouraged and assisted Bentinck and Dalhousie to assert, against determined opposition, the rights of native Christians and to advance on Christian lines by legislation and administrative action the moral and social condition of India.

We must not exaggerate the enterprise of these two rulers. The good work had been begun by Cornwallis and Wellesley ; during Bentinck's regime John Malcolm in the west and Thomas Munro in the south were showing equal determination, though in a more limited sphere. Bentinck, and to a lesser extent Dalhousie, could count on the wholehearted support of a Parliament that was still inspired and animated by the Reform Act of 1832. That the end of all government is the good of all the governed was the slogan of the times. The first

ADVANCE ON CHRISTIAN LINES

factory act for children, the first annual state grant for education, and the final abolition of slavery were the English accompaniment to Bentinck's humanitarian theme. The missionaries and the bishops were shrewd enough to see the importance of more rapid and frequent communication between England, with its new sense of responsibilities, and benighted India. They took the lead in urging upon the P. and O. Company and Government the importance of the overland route. Duff and Wilson were always at hand to support and substantiate episcopal representations. Bentinck created quite a sensation by inviting Duff to a Government House reception. And last, but not least, there was a small but very solid phalanx of Indian reformers, led by Ram Mohun Roy, to stimulate and reassure Bentinck in all his most daring work.

But, when all have received the honour due to them, the work of Bentinck and Dalhousie remains as an enduring monument of brave and resolute achievement. Bentinck was not faultless, Apart from his strange dislike of bishops and an established church, he is reproached by one contemporary with 'writing as many minutes as all his predecessors put together', while another says that 'he muddled what he meddled with as often as he improved it'. But few would deny that he earned the inscription written by Macaulay for his statue in Calcutta. 'He inspired Oriental despotism with the spirit of Britain and freedom, his constant study was to elevate the moral and intellectual character of the Government committed to his charge.' No less a tribute could justly be paid to Dalhousie. Neither of these two men ever forgot the constant need for tactful toleration of all forms of religion. But in each the question how far a Christian government ought to tolerate what it knows to be morally wrong was constantly introducing itself. There were many evils that

CHRISTIANITY AND GOVERNMENT OF INDIA

seemed to them outside the sphere of direct government action. Child marriage, certain gross forms of polygamy, and the widespread use of divorce, seemed to many western and oriental minds then, as they seem to-day, prolific of evil. But they left them to the influence of enlightened and informed public opinion. There remained many gross practices connected with the religions of the country which they shrank from 'perpetuating with a new authority by leaving them untouched', though to touch them might be construed as violation of their pledged impartiality.

First and foremost among them came suttee, the immolation of widows on their dead husbands' pyres. The horror and popularity of this practice had been reported by many since William Carey submitted his report. Though none denied that it was often a signal proof of voluntary devotion and piety (Sleeman reports such a case in the Central Provinces long after suttee had become illegal and it is not unknown to-day)¹ there was abundant evidence of its being encouraged or even enforced by men who under cover of religion were seeking to evade the expense of maintaining the widows or to secure for themselves their property. Albuquerque's refusal to countenance it in Portuguese India may or may not have been known to Bentinck. That Metcalfe and Bayley had prohibited it in the areas of their administration was known to him, as was also the ruling of certain Hindu lawyers that the Shastras enjoined on widows the alternatives of chastity *or* immolation, and the fact that there was no universally accepted Hindu authority for insisting on either alternative. He was assured by Ram Mohun Roy² that there would be no general uprising. With this support he rejected the ingenuous defence by a subordinate of this 'exceeding

¹ See list of authorities, s.v.

² Hindu reformer, see p. 171.

light affliction', he refused to accept as adequate the existing regulations that 'notice of intention should be sent to the nearest police officer', which obviously implicated the Government in the sin; he turned in despair from the 'Orientalists' who combined with their very legitimate love of the Hindu classics an exaggerated belief in their hold on the multitudes; and on a certain Sunday in 1829 he sent William Carey, Bengali translator to Government, his order suppressing suttee throughout British India. There was much agitation and clamour which culminated in an appeal rejected by the Privy Council in 1832. But there was no disturbance of a serious nature. The practice survived in many native states up to 1847 when Lord Hardinge commented on its suppression in Kashmir, and added significantly that he abstained from publishing the names of those states that had not yet taken such action, as he confidently expected that they would soon do! Within the next ten years it became illegal all over India.

Other forms of human sacrifice had been attacked by the authorities before suttee; Wellesley, on Carey's report, had made the dedication of children to the sacred waters at Saugor Point, and the exposure of the aged on the banks of the Ganges, penal offences. The campaign against similar manifestations of piety continued intermittently throughout the period. It was most intensive in the time of Lord Hardinge. From 1850 onwards human sacrifice has persisted only in remote areas among the most primitive tribes.

Thuggee was another evil that had spread widely over large tracts of India and was associated in the popular mind with religion. The thieves who waylaid travellers and strangled them after entering into friendly talk were devotees of Bhawani or Kali, wife of Siva. They had religious ceremonies of their own in which the sacramental consumption of sugar played a part. This aspect

CHRISTIANITY AND GOVERNMENT OF INDIA

of their work is admirably shown in some of Meadows Taylor's books.¹ Bentinck, though not the first to make war against them, surpassed all his predecessors in the rigour and success of his methods ; superintended by the ubiquitous and indefatigable Sleeman, the Thuggee department effected the conviction of over 1500 Thugs between 1826 and 1835. By the time Bentinck left India Thuggee as a religious organisation had practically ceased to exist, though highway robbery on similar lines necessitated the maintenance of a Thuggee and dacoity department in some parts of Central India until recent times.

Infanticide in India from the beginning of history has been a practice recognised and tacitly approved among certain castes and communities. The last census report (1921) suggests distinctly its survival in parts of North India. Jonathan Duncan had suppressed it in Benares and parts of western India before the time of Bentinck. From 1830 onwards the areas in which it was explicitly condemned and treated as criminal were steadily extended. In Central India, among the Rajput states and elsewhere the struggle was particularly severe. We hear of a ruler of Rajkot who was sequestered in 1835 as accessory to the murder of an infant daughter in defiance of an agreement made some years before between the British representative and a group of local Rajas.² They had bound themselves to outcaste any of their community found guilty of a crime that was stated in the bond to be contrary to the teaching of the Shastras. Dalhousie took steps to have the practice definitely and publicly notified as murder in all parts of India.

The hard fate of Hindu widows has been a constant theme of humanitarian writers from the earliest times

¹ See particularly *Confessions of a Thug*, 1839. Taylor served for many years in Hyderabad and Berar.

² See Aitchison's *Sanads and Treaties*, vol. iv, 422.

ADVANCE ON CHRISTIAN LINES

up to the present day. The degradation and hardship to which they are subjected under cover of religious sentiment cannot be cured by any legislative or administrative measures. But Dalhousie in passing the Act of 1856 which legalised their remarriage was advancing on the humanitarian lines laid down when his predecessor suppressed suttee.

We may pass quickly by the other humanitarian measures which adorned this period. For the evils against which they were aimed and the sentiment which inspired them are not directly associated with any form of religion. Such measures may perhaps justly be called Christian in so far as they have been carried through with least opposition and greatest speed in Christian lands or by Governments that profess themselves Christians. For this reason they are mentioned here. But they involve no subordination of one religion to another and are the outcome of an upward ethical tendency rather than of any distinct change in man's attitude towards God or the unseen world.

Slavery was recognised in India up to the time of Bentinck. The revenue department for instance in selling the property of a defaulter included his slaves among the property to be sold. Slave traffic between district and district was prohibited in 1832. The charter of 1833 naturally provided for the mitigation and ultimate abolition of the status. In 1843 legal recognition was finally denied to it. Barbaric modes of punishment, including branding, which had been taken over from our predecessors, had disappeared by 1849. The Indian Penal Code, begun by Macaulay and completed just after the close of the period, was one of its chief humanitarian triumphs. The custody of lunatics was regularised on humaner lines ; lepers continued to be outcastes liable to most savage treatment, if we may trust the accounts of men such as Duff who saw or heard

of them being buried alive. Bentinck, in 1834, abolished the penalty of flogging in the Indian Army ; but this was condemned even by enlightened critics as premature. Comic papers of the period refer satirically to its retention among white troops after it had been found unseemly for sepoys :

‘ For Christian backs remaining still

A moral source of every ill ’ ;

and the measure was before long rescinded.

But it is now time for us to turn to measures calculated to secure equality of rights for native Christians. And first among these must be placed Dalhousie’s great Act of 1850 which firmly established for all British India the great principle that a man’s religion should not operate in such a way as to deprive him of his civil rights. There was no explicit reference to Christianity in the measure, but it was generally recognised that its main result was to secure Christian converts from loss of property and of rights of inheritance. Under Hindu and Mohammedan law apostasy was penalised by loss of all such rights. And Warren Hastings had pledged the British Government to the observance and maintenance of those parts of the pre-existing laws and customs which touched directly on religion. Ostensibly for this reason, and also no doubt because the setting aside of this penalty removed one of the most powerful obstacles to conversion, there was a widespread and intensive agitation against the bill. Special stress was laid on the ceremonial responsibilities incurred by inheritors. Was a son for instance to be relieved by ‘ perversion ’ of the annual ceremonies on which the propitiation of his father’s spirit depended and yet to remain in possession of property inherited from the father ? Dalhousie stoutly emphasised the distinction between ceremonial and legal responsibility, asserted the inalienable right of the supreme Government to regulate succession to

ADVANCE ON CHRISTIAN LINES

property, and maintained that, when two pledges were inconsistent, the wider and more general must prevail. A Government that had promised to tolerate all religions could not be restrained from securing justice for one religion by a pledge to respect the legal rights of any other religions. Here again it was Bentinck who initiated the reform by a regulation of 1832 which seems to have been confined to Bengal. The bishop of Bombay in 1845 drew the Government's attention to the loss inflicted on converts in his diocese. Legislation was attempted and abandoned in response to agitation. A further memorial from the bishop followed and it was left for Dalhousie to establish legally and universally a principle for which Bentinck and a bishop (philanthropy acquaints a man with strange bed-fellows) had done so much.

On similar grounds Dalhousie, as head of the administration, swept aside all objections to the supply of Christian instruction for the children of native Christians in the Company's troops. Though as we shall see later native Christians were in fact if not in theory rejected from the Bengal Army, there were in other parts, and especially in south India, regiments where native Christians were sufficiently strong and numerous to make their claims in this important matter audible in high quarters.

The problems connected with the marriage of Christian converts were even more important and far more complicated. On the ecclesiastical side they had caused Heber and Daniel Wilson many anxious moments. What was the correct course for instance when a convert had several wives, attached to himself in unenlightened days, dependent on him? Both bishops were inclined to follow when possible the instructions of St. Paul, though with some inward misgivings apparently as to the infallibility of his authority where women were concerned. It seemed

CHRISTIANITY AND GOVERNMENT OF INDIA

safe, even though it might be a little callous, to retain only the first wife. But temporal precedence was perhaps not a safe guide where some wives followed the faith of the husband and some did not. It was all very perplexing. On the civil side such subtleties demanded less attentions. An important step was taken when converts were freed from all legal obligations to Hindu wives united only by child marriage, or to wives who refused for a stated period to join their husbands after conversion. Christian marriage was given civil and legal status during the period. But several other questions remained unsettled till after the close of the period.

Many bitter controversies, sometimes culminating in riots, arose out of the question as to the age at which a minor may be considered to have attained such discretion as justifies acceptance of a faith other than that of the parents without parental permission. The policy among missionaries during the period seems to have varied ; Duff in Bengal seems to have regarded at times the attainment of fourteen years as qualification for independent judgment, while in Bombay Wilson apparently considered sixteen a safer age. Much depended obviously on local and personal circumstances ; but there can be no doubt that some of the cases brought before the courts displayed bitter hostility to conversion as such rather than a *bona fide* desire to protect youth. In Calcutta Duff had several hard battles to fight, one of which ended in a challenge to a duel, sent to Duff by a European barrister whose public denunciation of missions for their ' unfair ' campaign against immature boys was ruthlessly and with equal publicity investigated by the stalwart Scotsman. In Bombay the conversion in 1839 of three Parsees, between sixteen and twenty years of age, led to riots, lawsuits, the formation of an anti-mission league, and the submission of a Parsee memorial to the Directors. The memorialists protested

ADVANCE ON CHRISTIAN LINES

against mission schools, urged that converts should not only lose their property and rights of inheritance, but also continue to be responsible for the families that were to be taken from them, and prayed that the 'age of discretion' should legally be fixed at twenty-one. The Bombay Government and Government of India took a commendably strong line on the memorial and recommended a continuance of strict neutrality and a fresh issue of Bentinck's regulation providing equal rights and privileges for all. The memorial met with little support from other communities or other localities in India and was wisely disregarded by the Directors.

The courts in dealing with such delicate cases showed on the whole no bias during the period, though in the earlier years there was perhaps a tendency to show exaggerated respect for the rights of parents. This was in any case a fault on the right side. By the close of the period the general principle seems to have been established by Sir Henry Maine¹ and other jurists that it was for judges to decide, with reference to the special circumstances of each case, what age, if any, short of sixteen, might reasonably be regarded as an age of discretion. It was clearly not a question that permitted any statutory definition.

The employment by Government of natives of India in positions of authority brought into consideration the rights of various castes and creeds to such employment. This question, which brings us into a sphere where religious prejudice plays a large part, became acute only in Bentinck's time. Cornwallis, in organising the Civil Service, had differentiated natives from Europeans and made it clear that parts of real responsibility would fall only to the latter. But Bentinck's regulation of 1832, declaring that no one should be disqualified from

¹ Legal member of Governor-General's Council, 1862-1869.

CHRISTIANITY AND GOVERNMENT OF INDIA

office on grounds of religion, birth, descent, or colour, was incorporated in the parliamentary charter of 1833. Out of this clause in the Charter came the pronouncement of 1835 in favour of a western education, that would fit the natives for posts from which they were no longer debarred, and for which indeed they were, in the interests of economy, sorely needed. But the clause also raised questions of great delicacy. No previous rulers of India had hesitated to give preference to members of particular castes or adherents of particular religions in distributing the sweets of office. If Hindus succeeded in gaining high office under the later Mohammedan rulers, they owed their success to their merits and to their skill in proving their peculiar usefulness rather than to any abstract principle of justice or equality.

On the whole it may be said of the British Government that with one exception they carried out loyally and to the best of their ability during this period the intention of this declaration. If the Brahmins continued, as under our predecessors, to obtain a share of office out of all proportion to their numbers, it was due to their skill in absorbing western education and not to any favouritism on the Government's part. If at times Mohammedans were preferred to more competent Hindus the choice denoted a desire to see both religions fairly represented in office rather than any partiality for Islam. The question of employing outcastes, which touched the Hindu on his most sensitive point, hardly emerged during the period as the educational attainments which Government required of candidates rarely if ever fell to the lot of those unfortunates.

A certain lack of firmness in demanding for such outcastes admission into schools controlled by Government was indeed noticeable and will be discussed in another context. But the one important exception to the principle of equality enunciated in the charter of

ADVANCE ON CHRISTIAN LINES

1833 was the Government's treatment, not of outcastes, but of native Christians. Converts, so far as government office was concerned, soon came to understand that profession of the same religion as their rulers, far from being regarded as a qualification for office, actually disqualified them and served as excuse for violating the spirit of the equality clause in the charter. It is with this subject that we shall now begin our study of that side of our rule in India which is less creditable to our reputation as protectors of all forms of religion.

CHAPTER XI

REACTIONARY INFLUENCE

European society in India—conditions of life—literary evidence—Mrs. Sherwood, W. D. Arnold and Miss Eden—intellectual and spiritual atrophy—periodical literature—Auckland and the Peregrine Maitland case—Government patronage of idolatry—our polytheistic liabilities—dry nurse to Vishnu—Ellenborough and the Somnath gates—ecclesiastical and lay protest—Directors intervene—ambiguity and delay—home feeling supports gradual withdrawal from temple management—recognition of caste by government and missions—Bishop Wilson's firmness—support of missions by Government servants—ambiguous warnings—encourage suspicion—converts in Bengal army—the case of Prabhu Din Naick.

THE preceding account of what the Government of India during this period was able to accomplish in accordance with Christian principles and for the protection of Christian converts was introduced by a reference to the large and distinguished band of capable and resolute government officers who did not hesitate openly to proclaim their allegiance to the Christian faith and their determination to secure fair play for it. Tribute was paid to their influence in the policy of the Government. Men such as Dalhousie and Bentinck were encouraged to proceed resolutely on lines congenial to themselves. The more timid rulers were often embarrassed and sometimes spurred into action by their vitality.

But there was another side to European life in India. Rulers who wanted support for inaction or pusillanimity never failed to find it among some of the types of European Society presented to us by the literature and letters of the period. It was indeed hardly to be expected that the wave of reform that was steadily sweeping away abuses and cleansing public life in England should

REACTIONARY INFLUENCE

perform so effectively its 'priestlike task' in India during this period. Means of communication between the two countries, thanks largely to the efforts of Wilson and Duff, were greatly improved before the period ended. But they remained inadequate to secure that interplay of thought and feeling which vitalises life in India to-day. Leave in Europe was seldom taken. Mind and body were seldom refreshed by residence in the Hills. There was little to relieve the 'hot dull vacancy of Indian life'. The taunt of those days that men left their morals behind them at the Cape was far less true of this period than of that which preceded it. But there seems to have been little of general interest or culture that survived the first few years of service. A station dinner in the 'forties must have been indeed a dull affair. One can hardly imagine any sprightly scheme for the moral or spiritual advance of India emerging from the evening drive round the Maidan that followed it. The station club in India to-day still remains fair game for the satirist. But it has at least its books and papers only a fortnight late ; and there are always new-comers fresh from leave and, in the cold weather, visitors to remind its members of interests and ideas in the larger world.

'There is a spirit of hostility to true holiness among the majority of our countrymen which threatens to have an outbreak.' This is strong condemnation from John Wilson who weighed his words, mixed freely with all classes of Bombay society, and was quick to recognise the kindly and active interest that some of its members showed in his work. The atmosphere in Bombay was always more favourable to mission work than in Bengal. Commerce was on the whole less suspicious than officialdom, and Hindu caste or Islam's sensitiveness were not so obtrusive in west India as the Bengal authorities found them. Regarding life in east India Mrs. Sher-

CHRISTIANITY AND GOVERNMENT OF INDIA

wood is even more uncompromising. In her Indian version of *Pilgrim's Progress*, Vanity Fair owes much of its meretricious glitter to European thoughtlessness or worse. 'He that spake of the cross was despised in that street.' Little Henry, who at the age of seven is quite sure he 'could not find one good person in all the market', has frequent reminders that sin is not confined to one colour. His step-mother 'always employed herself at table (when not actually eating) in smoking her hookah and most of her visitors did the same; instead of pleasant and useful discourse there was in general nothing to be heard but the rattling of plates and knives and forks, the creaking of a large fan suspended from the ceiling and the gurgling of water in the pipes'; a little variety was gained by scolding the servants and calling them names in their own language.

Mrs. Sherwood's standard was high and her outlook perhaps restricted, though she was a shrewd observer and practised what she preached. The impressions of a cultured and conscientious Punjab civilian, free from all prejudice or religious sectarianism, are equally depressing. W. D. Arnold¹ was far from happy in society which has left its mark on the novel dedicated by him to its exposure. *Oakfield* is an honest record of a brave struggle against uncongenial surroundings; as a sombre picture of India in the 'forties it is entitled to respect and in places to praise. But as a whole it is the dulllest work that has ever emerged from a family of literary distinction. It is to be hoped that Matthew was not flippant about it. There is no record that he ever read it to the end.

The hero of *Oakfield* finds his first experiences of life in India 'most disappointing and often shocking'. Looking back on the society he had known there he

¹ Son of Dr. Arnold, 1828-1859; military officer in civil employ; Director of Public Instruction in the Punjab. His early death on journey home is commemorated by Matthew Arnold in *A Southern Night*.

REACTIONARY INFLUENCE

finds it 'shallow, empty, and contemptible'. In vain does he urge his neighbours to 'think something, hope something, look forward to something'. Wherever he looks he is presented with a universal blank, finding everywhere 'an utter want of nobleness'. The official bears the mark of his commercial origin. Entangled in 'a gross and degrading mechanism', with no counter-acting influence such as piety or philosophy provide in England, 'he views a large portion of God's world as a profitable investment'. His indictment of 'the young fop of eighteen, product of the half-school, half-college system of Haileybury', who arrived in India quite unfit to fight against its evil genius, reminds us that Fort William College, as devised by Wellesley for the training of such men as Thomason and Metcalfe, had come to an end in 1830. No respect for abstract ideas, no serious insight into life, no recognition of spiritual facts, can anywhere be found. 'Shiploads of courage, bushels of pure unselfish visionary enthusiasm' are required before the foundations of Christianity can be established. Missionaries are useless. With Anglo-Indian Society as it is, Christianity can spread over India only like a mere superficial fashion of speech.

The Government resembles the society whose members determine its policy. No one short of a philosopher king can breathe into it that 'nobility' for which India looks. Its outlook is wholly secular. Whereas there is in most civilised countries a partially recognised idea of the higher and more spiritual ends of government, Calcutta looks solely to the protection of life and property and revenue collection. Few if any governments have been so just and liberal. None has ever been less inspired. We are reminded again and again, as we read the indictment, of the Roman Empire under Trajan. There must indeed have been many a Pliny who would have been the better for reading this antidote to self-

satisfaction. But it is doubtful whether Paul ever cherished such resentment against the powers that be, ordained of God, to whom he owed the facilities that made his great task possible. Honour to whom honour is due ! Arnold, as an official, may have been reluctant to defend himself. It is a common failing among Englishmen in India. It is sometimes said that intercourse between Indian and European was easier and less restrained in those days when communication with Europe was more difficult and when Anglo-Indian Society was thrown more completely on the resources of the country. If this was indeed the case a livelier interest in India's social and moral progress might reasonably have been expected. But in the Punjab as Arnold saw it the two races lived in different and irreconcilable worlds. Or, as Miss Eden put it, ' Queen Adelaide and O'Connell, the Jerseys and Pembrokes, are not further apart and more antipathetic than European and Native '.

Miss Eden, depicting the social world from its centre at Government House, though lighter in heart and touch than the sombre Punjab civilian, gives us an equally depressing picture of its intellectual barrenness. This clever good-natured woman of the world, ' dead and buried and sitting in her hot grave ' in Calcutta, or visiting upcountry stations with her brother the Governor-General, Lord Auckland, notes in the late 'thirties of last century the complete absence of ' topics of interest indigenous to the soil ' and the ineffective substitution of endless local gossip. English books are scarcely obtainable, though the success of *Pickwick* was such that there was an early reprint of it, lithographs and all, in Calcutta ; ' the only bit of fun in India '.

Her visitors in Calcutta are merely on their way out to make their fortune, or on their way home because they have made it, or because their health requires change of station and they come here to ask for it. The new

REACTIONARY INFLUENCE

arrivals sometimes stagger us (with their complexions), but we simply say, 'How coarse' and wait with confidence for the effects that three weeks' baking will have. Among her European acquaintances she finds not one pleasing or accomplished woman, 'not the sixth part of one'. Nothing vitalises a society composed of 'the smallest macadamized gossips' who 'sneer at each other's dresses and looks, and pick out small stories against each other by means of the Ayahs'. Despite the recognised existence of 'various native Mrs. Aides-de-Camp', profligacy is almost unknown. Husband and wife drive out perforce together because the society of neither is desired elsewhere. There is nothing to sap the morality of an Indian station. But on a foundation of 'low spirits and constant *tracasseries*' nothing of beauty or use can effectively be built.

It is doubtful whether Government House just at this time did much to raise the general tone of society, which was so sharply criticised by one of its inmates.

'George' says the Directors occasionally write a fine sentence about not attending exclusively to British interests, just as if the British were here for any other purpose, or as if everybody's interest were not to keep the country at peace.' There is a note of vulgarity in the prelude and a plausibility in its close that must have characterised much of the dinner talk at this period. Duff finds its exposure necessary in an admirably frank denunciation of Lord Auckland's whole policy. It was often too much for the Lawrences and Elphinstones of the period to counter. Such men however received valuable support from the journals which began during this period to enlighten Calcutta and extend the sphere of Anglo-Indian interests. The press remained unfettered throughout, and in the weekly *Friend of India*

¹ Lord Auckland. Quoted from Miss Eden's letters. See list of authorities, s.v.

CHRISTIANITY AND GOVERNMENT OF INDIA

(1833), *Quarterly Calcutta Review* (1844), and daily *Harkaru*, missionaries such as Duff and Marshman, civil servants such as Henry Lawrence, and Army officers such as Marsh and Kaye dealt with general questions of the day in a fearless, intelligent, and Christian spirit.

A topic that excited frequent and painful controversy in papers such as these, as well as in missionary periodicals and occasionally in Parliament, was the official attitude of the Government towards idolatry and the more obviously reprehensible practices of Islam and Hinduism.

‘What mischief religion does in a country’, Miss Eden writes plaintively in 1837. ‘George’ found it most vexatious that ‘an unsensible person like Sir Peregrine Maitland should refuse to give the national festivals the usual honours of drums, guns, etc., which they have had ever since the English set foot in India’. How tiresome was this ‘irritation kept up on the plea of conscience when the soothing system would be much more commendable and much easier’!

It was indeed a troublesome budget of papers that had come from Madras to the Governor-General, Lord Auckland, already perplexed, and the hot weather beginning too, with difficulties about the opium trade with China and the Afghan frontier. For the stricter sect of Christian officials was in revolt. A memorial against official patronage of idolatry, signed by two hundred representatives of the ecclesiastical, civil, and military departments and of the non-official world, had been submitted through Bishop Corrie to the Madras Government, who had thereupon censured the Bishop for ‘not moderating the zeal of overheated minds’. Bishops are not censured publicly every day. And this Bishop had heaped more fuel on the fire by appealing against the censure to the Governor-General, and by dying before that distressed authority could reason with him. Worse was to follow. The Directors, when the

memorial ultimately reached them, sent forth a despatch which was so ambiguous and faint-hearted that Sir Peregrine Maitland, the Commander-in-Chief of Madras, resigned, after refusing to punish a European soldier who would not take part in a ceremonial guard for the salutation of a heathen deity. A Madras civilian followed his example. And here was Lord Auckland faced by the memory of a censured bishop, whose saintly life and untimely death left an uncomfortable flavour of martyrdom, and by the resignation, official but by no means temperamental, of a distinguished soldier who stood high in 'The Duke's' esteem. Fortunately for the Government discipline still remained for the Duke the cardinal virtue. He condemned Sir Peregrine's action, but showed his approval of his spirit by getting for him the governorship of the Cape. And the Directors were still faced by the question, 'How to dispose of our idolatrous commitments !'

It must indeed have been embarrassing for men exposed to the full force of the evangelical revival to hear such phrases as 'Dry nurse to Vishnu', and 'Churchwarden of Juggernaut' applied to the Company that they directed. Yet the process by which they had been made responsible for the patronage and support of heathen institutions was natural and almost inevitable. The Company in taking over the assets of those who preceded them in the rule of India had accepted also their liabilities, religious as well as secular. Its aim from the start was to create a feeling of security among its native subjects. This involved the recognition of existing and long-established rights and privileges. The Bengal regulations of 1793 guaranteed the application of the laws of the Shastras and Koran wherever they were not in conflict with peace and justice. Wellesley promised the Carnatic in 1801 not only the full enjoyment of every just and ascertained civil right, but also

CHRISTIANITY AND GOVERNMENT OF INDIA

a free exercise of religious institutions and domestic usages of ancestors.

This guarantee involved first and foremost the continuance of all state endowments of Hindu and Moham-medan worship. And in no country, as Sir Alfred Lyall¹ has reminded us, were the popular religions more richly endowed than in India. According to Hindu ideas of sovereignty a ruler must endow his own religion liberally ; he ought, if he is liberal, to endow other local religions ; and all religions can claim his sympathy, advice, and administrative help. We succeeded rulers who had for the most part observed these principles. To the honour of India it must be said that at no time has any determined opposition been made to expenditure by the British Government on its own religious establishment or in aid of missions' medical or educational work that has avowedly a religious purpose. And India found no suggestion of apostasy in the annual allotment by a Christian Government of a sum for 'support of mosques, temples, and *other pious and beneficent purposes*'. But it was perhaps natural that the Mission world of the 'thirties should deprecate the suggestion conveyed by the phrase. It viewed too with alarm the increase in the amount of total endowment, due to the sounder administration of estates and property that had been set apart for such endowment. And it shuddered when Lord Wellesley bluntly referred to 'religious institutions of the Hindu faith maintained by the British Government'.

The Government was also committed by precedent to the patronage and protection of religious institutions and ceremonies. Civil and military officers were deputed to represent it at great festivals and the Company's troops fired deferential salutes. For the protection and comfort of pilgrims careful arrangements were made. Men of

¹ Asiatic Studies.

REACTIONARY INFLUENCE

all religions were collected, by force if necessary, to drag the idol's car. Heber records the punishment by a British magistrate of an Indian Christian who refused to be impressed for this purpose. But there is also evidence that some refused to countenance such a clear violation of the pledge to respect religious prejudice.

Many, but for the most part innocent, were the heathen practices taken over generally from our predecessors. A military salute announced the sighting of the New Moon that ushered in Ramzan. A coconut was officially broken at the burst of the Monsoon. Brahmins were officially employed for the invocation of propitious weather. Government offices, though open on Sundays, were closed on heathen festivals. Government records were dedicated to Ganesh and Government letters were prepared with the Hindu invocation 'Sri'. Just as the Company's coinage up to 1830 retained the effigy of the no longer great Mogul, so their attitude towards their subjects' religions showed a determination to avoid all breach with the past. Relations with other countries were marked by equally comprehensive geniality. There was no flutter in the Bengal Secretariat when a draft was prepared of congratulations from the Governor-General of India to the Grand Lama of Thibet on his recent incarnation.

Lord Ellenborough throughout his term of office was haunted by the fear of arousing the Hindu world by any action capable of misinterpretation as a Christian gesture. In 1842 he conceived a heroic scheme for reassuring the Hindu mind. The Kabul mission was ordered to bring back from Ghazni the gates of the Somnath temple which had been carried off in triumph by the iconoclastic invader Mahmud many centuries before. They were to be restored to their original position as a sign of the Company's determination to protect the Hindu faith. The idea was calculated, as the Bombay Chief Secretary

CHRISTIANITY AND GOVERNMENT OF INDIA

made bold to remark, 'to astonish the whole Christian world'. Its actual result was to provide humorists with a fertile topic and Macaulay with suitable material for a speech by which he subsequently succeeded in procuring Ellenborough's recall. Enquiry revealed that there was no proof that Somnath, no longer a place of worship, had any such gates in its temple, the site of which had become the resort of swine. The 'idol' that had been destroyed there by Mahmud was a phallic emblem of Siva worship. The neighbouring Brahmins were in 1842 Vaishnavites who showed no anxiety to recover such an emblem. As Somnath was situated in a well affected Mohammedan state the result of the restoration on the local authorities deserved consideration! Chastened but not subdued by these facts Ellenborough decided to proclaim the restoration as a national rather than a religious tribute. Ultimately the gates got no further than Agra and passed with Ellenborough's recall out of history.

To endowment, patronage, and support were added the duties of administration. The Englishman, in India anyhow, hates 'to see a job badly done'; he superintended with a relish the affairs of any temple or mosque in his administrative area for which the Company was in anyway responsible. Nothing came amiss to him and his work was thorough. Whether it was the appointment of temple staff, or regulations for dancing girls, temple fees, or pilgrims' certificates, or the collection of local dues, everything was done decently and in order, with a lavish expenditure of government paper and time. Corruption was checked and 'Moloch protected from the felony of his own servants'.

Moreover if the Company's money and its servants' time were to be spent on such work it was but reasonable that any *quid pro quo* that had been enjoyed by its predecessors should be retained by the Company and aug-

REACTIONARY INFLUENCE

mented, if possible, by sound administration. It was not only on the expenditure side of the estimates that temples and mosques figured. Something too was to be shown on the receipts side, in the shape of pilgrim taxes and the like. It was so easy to meet demands from the Christian world for their abolition by the reply that it would be interpreted by Islam as a concession to Hinduism. Had not even the missionaries objected to reduction of the tax as a step calculated to increase the popularity of pilgrimage !

It is improbable that anyone in India or England read into this tender dry nursing of Hindu and Moham-medan religious institutions any subordination by the Government of Christian to Hindu or Islamic cults. But it was possible to infer from it indifference to all religion. And it was certainly unfortunate that a Government which shrank timidly from any open identification with Christian propaganda should assist institutions and ceremonies that were calculated to keep the other religions of the country in a lively and flourishing condition. The Madras Comic Almanack of 1837 records the bestowal of the Order of British India on Kilpauk Chittaldroog 'for having proved that the procession of Juggernaut is eminently calculated to advance the cause of civilisation and to enlighten the minds of the Hindus in general and the lower orders in particular'. Under a benevolent Government in fact there was a boom in indigenous religions. Thackeray reminds us that the Bundelcund Banking Company thrived on it.¹ 'The order from Birmingham for idols alone (made with their copper and paid in their wool) was enough to make the low church party in England cry out ; and a debate on the subject took place in the House of Commons, of which the effect was to send up the shares of the B.B.C. on the London Exchange.'

¹ The Newcomes.

CHRISTIANITY AND GOVERNMENT OF INDIA

The polytheistic liabilities of the Company in fact were not merely being honoured. They were being considerably enlarged. The Company's servants, unable to endure the sight of inefficiency and peculation, often intervened to save a temple and became in course of time more than mother and father to the object of their attention. In 1796 Collector Place prevailed on the Fort St. George Government to take over the administration of a famous Vaishnavite shrine at Conjeeveram in south India. The reasons put forward were that the proper and regular conduct of religious ceremonies conduced to the happiness of the Company's subjects. (It was at the time impossible to get money allotted for the building of churches, and the Directors for economy were keeping chaplains' posts unfilled !) Moreover such interest on Government's part 'conciliated' the people. Place himself presented jewels to the Temple which are still on view there. And the residents fifty years later scandalised Alexander Duff by relating all that a benevolent Sircar had done for their local shrine. In 1833 the Madras Government reported that the administration of 7600 Hindu shrines was vested in the Government. 'Our connection with Hindu idolatry has grown with our greatness. Religious institutions did not receive previously the same measure of support.'

By this time it was clear to the Directors that something must be done, if not to placate evangelical critics, at least to make their attitude consistent with the policy of 'strict neutrality' which was always emphasised when Christian claims were advanced. It was in this same year, 1833, that they had opposed any increase in the episcopal establishment of India on the grounds that it was an unfair charge on 'pagan revenues'. But two Bishops were added in spite of the protest. With Daniel Wilson and Corrie using their episcopal influence and personal popularity in Calcutta and Madras, with a

REACTIONARY INFLUENCE

ruthless reformer like Bentinck at Government House, with Alexander Duff and John Wilson leading the missionaries of Bengal and Bombay, and with one of their own number, Charles Grant's son, filling the mind of the President of the Board of Control with evangelical ideas, words anyhow were necessary. Perhaps they would obviate the need for action that could only lead to trouble.

Before 1833 had closed, and with the memory of humiliating concessions enforced in the revised charter of that year fresh upon them, the Directors 'reviewed the situation' in a despatch. Toleration and civil protection of religion must on no account be converted into patronage of what is at variance with the precepts and practices of Christianity. Government's intimate connection with unhappy and debasing superstitions inspired a belief that it admitted their divine origin. It is distressing to give up what not only conciliates the people but in places yields substantial profit. Yet it is necessary to give up all internal management of temples and mosques, all revenue arising out of idolatry, and all official attendance at, or recognition of, festivals. No government officer must any longer collect fees for a temple or receive money for its management. Time must of course be allowed for adjustment. And all governments were asked for further information regarding present commitments and possible difficulties.

No one with any knowledge of government offices in India could have failed to see the opening left by this closing request for information. For the next few years the despatch produced no results, except masses of statistics and endless notes and minutes on the difficulties, many of them very real, involved by these orders. In 1837 came the petition from Madras and the Peregrine Maitland affair. The question was raised in Parliament and critics did not fail to remember that a bishop had

CHRISTIANITY AND GOVERNMENT OF INDIA

been censured, and a commander-in-chief forced to resign, for action strictly in accordance with the general tenor of the 1833 despatch. Influential civil servants of the Company were beginning to kick. A member of the Madras board of revenue in protesting against expenditure on temple repairs stigmatised it boldly as 'a step in a direction contrary to truth'.

As a result of parliamentary pressure orders issued in 1838 for 'immediate compliance' with the instructions of 1833. The phrase was interpreted with the freedom from pedantic exactitude customary to officials faced with embarrassing orders. It took only two more years to abolish the pilgrim tax. But it was not till six years after the meeting that government officers were finally relieved of all religious duties and responsibilities, including the preservation of buildings, management of funds and appointment of temple officers. In spite of a protest from the Bombay missionary conference, which argued that no treaties contrary to the laws of God can be binding, the Government rightly refused to abolish any kind of endowment which had been recognised and taken over as a liability from their predecessors.

The gradual withdrawal of Government from management and patronage was undoubtedly responsible for some of its unpopularity in 1857. That it was merely a corollary of the doctrine of neutrality was ignored by the many who found grounds for suspicion in all the actions of Government, and not least in its nervous dread of any appearance of friendship towards Christianity. It may be true that suspicion was exacerbated by the consistent pressure brought to bear on Government by Christian missions and their supporters during the long drawn-out affair. Such pressure was perhaps impolitic; but if the Government had only asserted boldly at the outset its determination to be absolutely impartial in its application of neutrality, and if prompt action had

REACTIONARY INFLUENCE

followed such a pronouncement, there would have been no need for pressure nor grounds for suspicion.

The tacit recognition by the Government of caste distinctions was from time to time cited as another instance of weak concession to religious prejudice. The charter of 1833 had confirmed and applied to all the Company's possessions the principle already formulated by Bentinck in Bengal, that 'no disabilities in respect of any place, office or employment should be recognised by reason of religion, place of birth, descent, or colour'. We have seen already how ineffective this declaration was in establishing the claims of Indian Christians to government service. The difficulty there was one of religion rather than caste; for Indian Christians, however low their caste prior to conversion, were recognised as superior to outcastes and pariahs; they were not in the same way or to the same extent a source of pollution. The total illiteracy and economic suppression of the outcastes during this period postponed effectively all question of their employment to any posts except those of the meanest and humblest description. That they were not appointed, or appointed only in very small numbers, even to such posts was due not to any deference to Hindu feeling, but to recognition of the fact that the aversion they would arouse, and the ostracism they would undergo, would prevent them from being either happy or useful in such posts. The same difficulty is felt to-day. It was felt moreover that the habits of those who had not come under Christian influence were such as to disqualify them for any work that brought them into close contact with other castes. Macaulay, during the short period of his control of education in Bengal, applied the principle of the 1833 charter in declaring all schools open to all castes. But this remained for the most part a dead letter, partly because few outcastes during this period had any desire to see

CHRISTIANITY AND GOVERNMENT OF INDIA

their children educated, and partly because fewer still were prepared to submit themselves or their children to the persecution that would inevitably attend those who took advantage of this proclamation.

All that can be laid to the door of Government in this matter is that they refused to take any active steps to educate public opinion or to suppress the many forms of persecution that were not obviously criminal. Their failure was in a sphere where stronger and more experienced Governments of later time have failed. Nor was it possible for Christian missions, during the earlier part of the period at least, to set forth their own actions or policy as an example. It took them many years to set their own house in order. Though the earliest Protestant missionaries in the south of India, where caste feeling is most emphatic, had definitely forbidden all caste distinctions among their converts, such distinctions had slowly but steadily obtained recognition, until by the end of the eighteenth century there was little to choose in this matter between Protestant and Roman Catholic Missions, which from earliest times have recognised, and still continue in some measure to recognise, caste. Even Schwartz, though opposed to it in principle, found it necessary to deal very gently with its manifestations and checked only its most extreme and barbarous forms. When Bishop Heber visited South India in 1826 he found it impossible to induce caste Christians to assemble or take the Sacrament with pariah Christians.

Heber's tact, moderation, and comprehensive humanity led him at first to question the expediency of any frontal attack on caste. He was inclined to accept Schwartz's compromise, and to await hopefully the undermining of the evil by slow permeation of Christian principles. He saw however the need for further enquiry which ultimately revealed the division of missionaries into two

REACTIONARY INFLUENCE

almost equal camps, and the existence of a very bitter feeling among caste Christians against any drastic condemnation of caste. Heber's death left the final settlement of the matter to Bishop Wilson, whose strong and decisive campaign against all caste distinction determined for the future the policy of Protestant Missions.¹ It would be out of place to describe here the tact, firmness, and humour displayed by the bishop during the long negotiations. No one who has ever engaged in ecclesiastical controversy, particularly in the East, could fail to be impressed by his magnificent urbanity in the closing stages. Assailed by a hot-tempered and prolix champion of caste the bishop 'ignored his arguments and complimented him on his English'. Such a man deserved the triumph he won when shortly afterwards pariah and caste men knelt side by side before the altar.

But what concerns us more is the violence of the antagonism aroused by the bishop's action, and the fact that his opponents in the Indian Christian world thought it worth while to appeal to the Government. The Government indeed considered at one time the possibility of intervention. The Directors were wise enough to turn a deaf ear. The story as a whole shows the strength of caste even in a sphere that had been subjected to Christian influence; it illustrates the general conception of Government at that time as the defender *de jure* of all indigenous belief and custom; and it explains why the Government was able to make so little headway against caste and why this particular omission on their part received, comparatively, so little criticism in definitely Christian circles.

It was certainly hard on the sorely perplexed Directors that, at the very time when outside pressure was forcing them to forbid all official connection of the Company's

¹ Historically the Baptists had been the first to disallow caste.

CHRISTIANITY AND GOVERNMENT OF INDIA

servants with Hindu and Mohammedan religious institutions and ceremonies, their attention should repeatedly be drawn to the open support and patronage of Christian mission undertakings by influential and conspicuous officials. We have already had occasion to notice the eager and active participation of men such as the Lawrences and Edwardes in all forms of Christian propagation. What was a Government pledged conclusively to 'neutrality' to do with such champions, or with the many others who by chairmanship of committees (even by teaching in Sunday schools !) definitely suggested to the 'ex hypothesi' sensitive Indian mind that British officials really acted on the faith that they professed !

That any strong resentment or deep suspicion was engendered by such open interest in Christian work is a theory that rests on no satisfactory evidence. It seems to have originated in the nervous anxiety of those who by their shilly-shallying and restless manoeuvres created in actual fact the suspicion that they foolishly ascribed to the action of their more self-confident subordinates. Periodic attempts were made to stop all open support of missions by officials. Many years elapsed before a distinction was systematically made between what was done by a supporter in his official and in his private capacity. While distracted secretaries were fumbling after this distinction, attempts were made to distinguish 'open and tactless' from 'discreet and tactful' support. The Indian public in consequence was misled into confusing the straightforward and honest Christian undertakings of men acting in a private not official capacity with the furtive intrigues of influential officials. Undertakings of the former type have never excited alarm in India. Suspicion of the latter has been ever a fruitful cause of riot and rebellion.

Such misunderstanding could not but arise from

REACTIONARY INFLUENCE

orders forbidding the Company's chaplains to use mission chapels for their services, lest their connection with mission work should be suspected, or from a carefully worded despatch emphasising the danger of all religious discussion or enquiry in government schools and colleges. In 1847 the Directors 'reminded' government servants that they must abstain from interference with the religions of the natives of India and vaguely 'drew attention' to acts of indiscretion without giving particulars. The Government of India was puzzled and alarmed by the gloom of this warning. 'Did it', they asked, with an unusual flash of inspiration, 'cover the private acts of officials?' This was too much for tired and harassed Directors. 'The application of the rule', they replied gravely, 'should be governed by the principles on which it is founded!'

Never had words been used more carefully to conceal meaning. But by this time the Indian Government was beginning to enjoy the game. Back went the shuttlecock. 'Could civil and military officers in their private capacity promote mission work, or could they not?' Once again the Directors rallied for a supreme effort. 'Yes, private funds may be contributed to missions. But there must be no manifestation of a disposition calculated to excite uneasiness or alarm.' Official jargon is always difficult to translate. But what the Directors had apparently at the back of their distraught minds was a desire to make Christian-spirited officials in India responsible beforehand for any suspicions that the vague suggestions of Leadenhall Street might arouse in India. Similar bleatings followed riots in Bombay caused by the conversion of some Parsees in 1879. 'Civil servants must be careful in the use of their legitimate influence lest their efforts should be misrepresented'. In spite of Dalhousie's efforts in the direction of a bolder and more resolute 'declaration of rights' the situation

CHRISTIANITY AND GOVERNMENT OF INDIA

remained obscure, and consequently to the native mind confusing and ominous, up to the time of the Mutiny.

The case of Prabhu Din Naick may illustrate and close this tale of nervous indecision. In 1819 a sepoy of this name in a Brahmin regiment of the Bengal army was converted and baptised by a Company chaplain called Fisher. This 'singular and unprecedented' event roused the commanding officer to complain to his superior officer. His consent had not been obtained (presumably by the Chaplain not the Holy Spirit) and recruiting was likely to be affected. In due course the file reached the Governor-General. The erring Naick was suspended and a full enquiry ordered.

The chaplain reported that he had not primarily been responsible for the lapse from ancestral faith. The downward path had been begun nine years before in Mauritius. But he had answered enquiries made in person at his house by the sepoy and had always allowed sepoys to attend his services if they wished to do so. His baptism had followed his earnest entreaties in the face of bribes and threats from his companions. Since his conversion there had been no complaints on the score of slackness in military duties. No disturbance had taken place and persecution by his comrades had ceased. The court of enquiry added that no chaplain or missionary had ever entered the military lines. Fisher's action and general attitude were supported by Bishop Middleton, a man not likely to spare evangelical indiscretion when detected ; Bishop Heber, who saw the papers, later acquitted Fisher of all blame. The Government, however, refused to reinstate the sepoy in his regiment. He was retired on full pay and refused with proper pride an offer subsequently made to admit him to another regiment. A general impression was created throughout the Bengal army that the Government was

REACTIONARY INFLUENCE

not prepared openly to tolerate Christianity. What the Government was really aiming at only God knew. But the army had its suspicions. About the same time the commanding officer of the 14th Foot reported that the Christian sepoys in his regiment were far the best.

CHAPTER XII

MISSION INFLUENCE ON EDUCATION. DUFF AND WILSON

Educational protagonists—Bentinck, Dalhousie, Duff, Wilson—early educational efforts—doubts regarding grants to mission schools—Anglicists and Orientalists in 1835—mission share in Bentinck's decision—Macaulay's faith in secular education—and its first fruits—the 'Home of Learning'—David Hare and De Rozio—oriental reaction—final triumph of the West—need for religious education recognised—mission co-operation secured by Wood's despatch, 1854—approval of Ram Mohun Roy and Hindu reformers—absence of orthodox opposition.

DURING the period now under review the educational policy of the British Government in India was formulated and ultimately embodied in a system which has continued unchanged in its main features up to the present day. In the shaping of this policy, and in the elaboration of the system, the British Government was brought into close and eventually most friendly touch with Christian agencies. In no sphere of Indian administration have these agencies been able to demonstrate more effectively their usefulness to the State or their capacity for co-operation. There has in fact been a tendency to identify the interests of Government and Christian missions ; and it will be necessary to discuss later whether the missions have profited as much as the Government from this identification.

Three principles were clearly established during this period. The first defines and limits the educational responsibilities of the British Government. Accepting the task of advancing by education the moral and material progress of the Indian peoples, the Government finally dissociated itself from any form, however vague and

MISSION INFLUENCE ON EDUCATION

unsectarian, of religious teaching. The remaining two principles explain the inclusion of Christian mission institutions within the Government system. The missions definitely included education of all kinds and grades, among their instruments for the evangelisation of India. And the Government was led gradually to recognise the inevitable need for the co-operation of missions, and the possibility of ensuring this co-operation by financial assistance, without departure from the previously established principle of religious neutrality.

With these principles the names of the boldest Governors-General, Bentinck and Dalhousie, and of the great Scotch missionaries, Alexander Duff and John Wilson, are closely associated. Dalhousie alone accepted everything that the three principles implied. Bentinck, without the experience that guided Dalhousie, doubted the wisdom of Government grants to mission institutions. Duff and Wilson throughout, though with gradually waning emphasis, deprecated the dissociation of the Government from all forms of religious instruction. It was Duff who slowly but surely convinced the Mission world by the success of his experiments and the persistent fearlessness of his speeches and pamphlets, that success depended on the enlightenment of India by Christian secondary schools and colleges. It was not easy to convince a home committee scared, in the troubled 'thirties, by such boldness 'in these days of agitation, turmoil, revolutionary tendencies and irregularities of every description'. Duff's task, as he was ready to admit, was facilitated by Bentinck's bold determination that the energy of the British in India should be concentrated on securing for those committed to their care the choicest gifts of western civilisation. All alike believed that they were preparing a mine which would ultimately overthrow all religious and social obstacles to the progress of India.

CHRISTIANITY AND GOVERNMENT OF INDIA

It would be grossly unfair to Schwartz and Carey to suggest that educational work had been entirely neglected by Christian missions before Duff began his Indian work in 1830. In south India Schwartz had spread a network of vernacular schools. English education had been attempted in Tanjore, though it hardly survived the death of Schwartz. The London Mission had a system of vernacular schools in Bengal by the time that the Baptist Marshman, with the help of Ram Mohun Roy and Dwarkanath Tagore inaugurated their Bengali schools in 1816. In 1818 the great Baptist mission college in Serhampore had been opened. Here Carey's genius conceived the idea of a 'Christian Benares' where Christian scholars would be steeped in oriental and western learning, and Indians of all castes would have access to the best that east and west could jointly provide. Without any assistance from public funds, from the literary earnings and press profits of the devoted band of missionaries, a stately building rose in which two hundred students, including eleven Brahmins and three Mohammedans, were shortly enrolled. Thirty pundits from all parts of India attended the first examination of the college. The King of Denmark gave the land and granted in 1827 a royal charter which authorised the college to grant degrees in all faculties. Serhampore is now under the British flag. But the curious investigator is still reminded of the debt that Christian missions and Indian education owe to this gallant little Danish settlement by the unique privilege retained by the college, as a relic of its Danish charter, of conferring degrees in Christian theology.

The Anglican faith could hardly emulate the Baptists' zeal. In 1820 the foundation of Bishop's College, Calcutta, recorded the educational first-fruits of the episcopal establishment granted in 1813. In seven years a cautious bishop had satisfied himself and the

MISSION INFLUENCE ON EDUCATION

Government that India would not resent this reminder of Christian intrusion.

But the foundation of Serhampore College exhausted the first fine careless rapture of the Baptists. The opposition of their home committee to ambitious educational schemes continued. And the evangelical supporters of Anglican missions were far more interested in the dissemination of the Bible and baptismal statistics than in any measures for the general enlightenment of India. Duff's fiery personality, and the work by which personally he sustained the cause that he had at heart, did what even Schwartz and Carey could not in this particular field have done. The Scotch belief in education triumphed. All Calcutta, official, mercantile and military, Europeans and Indians, used to attend his periodical examinations of the students of his College, and marvel at the stream of 'useful information', scientific, historical, literary, and theological that he pumped out of his Bengali pupils. It was the age of Children's Guides to Knowledge. And Duff was Bengal's guide.

But many years were to pass before the official world was prepared to do more than politely admire such work. The policy of financial aid to mission schools was not officially approved till Wood's despatch of 1854. Characteristically the governments in various provinces gave grants to individual schools here and there from 1813 onwards, regardless of the possibility of misinterpretation of their motives. Lord Hardinge visited Serhampore and inspected mission schools. Lord Hastings became a patron of the college and subscribed to its funds. In 1835 Lord Clive asked the Scotch Mission to continue to give religious instruction in the Poona schools that had been taken over by the Government. But no less characteristic were the many instances of refusal of grants or even recognition and

CHRISTIANITY AND GOVERNMENT OF INDIA

patronage. Amherst refused a grant to Bishops College, and Bentinck was bold enough to reject an application from Duff's institution. A similar application from a school intended for Calcutta ladies was dismissed in spite of a strong recommendation from the Governor-General's Council. Thirty years later only Dalhousie's resolute persistence won for the Bethune girls' school in Calcutta the privilege of having on its council a prominent member of Council and of enjoying the official recognition of the Government. It was one thing to aim at educating male India for administrative and professional work, and quite another thing to invade the privacy of the Indian home by tampering with the ideas and outlook of Indian women.

The old fear was in fact constantly reasserting itself. Growing interest in Christian activities for the welfare of India was periodically checked by the thought that misinterpretation of such interest might lead to popular tumult. But gradually and persistently Duff and Wilson were producing results that justified Dalhousie's bold declaration of 1854. 'We carry the principle of neutrality too far. Even from the political point of view we err in ignoring so completely as we do the agency of ministers of our own true faith in extending education among the people.' Consistently with this declaration he was encouraging provincial governments to aid liberally mission education a few years before Wood's despatch of 1854 set the seal of the Board of Control's approval on his policy.

The cause of mission education was in fact substantially advanced by the controversy that preceded Bentinck's famous declaration of 1835 in favour of western education and by the substance of that declaration. Though the question of religion was directly discussed in none of the acrimonious minutes that passed between Orientalists and Anglicists, the superior

MISSION INFLUENCE ON EDUCATION

eloquence and ruthlessness of the Anglicists undoubtedly created a strong prejudice against Hinduism and Islam of which Duff and Wilson were not slow to take advantage. Macaulay refused to allow for one moment the claims of the indigenous religions to be admitted in favour of oriental studies. Even the Directors, forgetting for the moment their passionate fear of arousing Indian hostility, ventured to find fault with those who had advocated the study of the Indian classics. They had suggested 'any learning that is useful ; but poetry is not useful and we suspect that there is little in Hindu or Mohammedan literature that is'. From such a declaration it was only a short step to the opinion expressed by the Council of Instruction that 'only the missions can educate the lower classes'.

The final defeat of the Orientalists, by a declaration that Prinsep,¹ Oriental protagonist, compared to the burning of the library at Alexandria, emphasised the utilitarian and moral aspects of the Government's educational policy. There may be interpreters of the Sermon on the Mount who question its essential association with utilitarian aims or the importing of useful information. But Duff was not one of these and he made it his purpose to convince the Government that in both these aims they had the support of missions. On the government side there were many who believed that the missions could count ultimately on corresponding support from Government.

Macaulay and Trevelyan² alike believed that large and continuous doses of western knowledge would not only purge India of Hindu and Islamic religions, but also build up a new India with an essentially Christian

¹ H.T.P. Member of Bengal Council and subsequently Director of East India Co.

² C. E. T., brother-in-law of Macaulay ; civil servant ; Governor of Madras ; took active part in shaping Indian educational policy.

CHRISTIANITY AND GOVERNMENT OF INDIA

constitution. When Macaulay prophesied that in forty years' time there would not be an idolator left in Bengal his joy and hopefulness were no doubt Christian ; but it was to ' Wisdom while you Wait ' rather than the Bible that he looked for the fulfilment of his hope.

It was David Hare, watchmaker and positivist, who by his educational work first caused these official optimists to wonder whether the effect of undiluted western information would be what they had at first so confidently predicted. Hare was a philanthropist who took an active interest in every movement that affected the moral and intellectual improvement of Bengal, except that which was directed to the propagation of Christianity. The five thousand Hindus who followed his body to the grave rightly saw in him a man who had dedicated his life to Indian progress. After earning for himself in the first sixteen years of the nineteenth century a competence that would have enabled him to live thenceforth at ease in England he stayed in India, as his Calcutta statue tells us, ' to promote the welfare of the land of his adoption '. Amongst other things he was the first to draw the attention of Government to the treatment of indentured Indian coolies in Mauritius.

To David Hare the founders of the Vidyalaya turned in 1817. This ' Home of Learning ', which grew into the Hindu College, and ultimately into the Government Presidency College of Calcutta, represented a determination on the part of an influential band of Hindu reformers in Calcutta to secure for the Hindu world the benefits of western education without the addition of Christian teaching.

The co-operation of the great reformer, Ram Mohun Roy, friend and counsellor of Bentinck, involved an equally antagonistic attitude towards Hindu orthodoxy. In Hare they found a leader after their own heart. For many years he inspired and directed this educational

MISSION INFLUENCE ON EDUCATION

venture. Its success was partially at least responsible for Bentinck's belief that India really desired and was capable of using western education. For us its interest consists mainly in the fact that it was the first experiment in the direction of a purely and avowedly secular education that India had seen.

Its influence was soon felt. The principal, De Rozio, presents himself as 'a Free-thinker possessed of affable manners'. His chief battle-cry was 'down with Hinduism'. He founded a paper called *The Parthenon*, one of his theories apparently being that a religion after it had ceased to function became harmless and ornamental. His enemies, who were numerous, accused him among other things of having advocated incest through the medium of his paper. Among his early disciples was Radha Nath Sickdar. 'His hobby was beef and he maintained that beef eaters were never bullied.' Another stalwart beef eater studied Paley's evidences as the basis of a series of articles against the Christian religion.

It is not surprising to find the committee of public instruction reporting before long that 'the moral effect of this institution has been remarkable. Impatience of the instructions of Hinduism and disregard of its ceremonies are openly avowed by some and secretly entertained by others'. Before long even the most secularist of the managers feared that De Rozio was really going too far in his undermining of all religious influence. His substitution of extracts from Pope's Iliad for the usual Brahmin prayers was perhaps pardonable. But what was to be said of a dinner party of students which ended with the hurling of beef fragments into the courtyard of a neighbouring Brahmin !

De Rozio was dismissed and an order promulgated against the use of books subversive of morality and decency. The students to mark their resentment left the college in a body and resorted to Duff's College.

CHRISTIANITY AND GOVERNMENT OF INDIA

Even Christian instruction was better than the drab enforcement of respect for Hindu prejudice.

By this time Hare's connection with the college had ceased. That he had a sense of humour is suggested by his Hindu biographer who reports with surprise that, when greeted by a grateful student with the words, 'Thou art the mother that has suckled us', he 'shrugged his head and showed a smile on his face'. It was perhaps in order to avoid such embarrassing compliments that he accepted a judgeship in the Court of Small Causes. Up to the end of his life he was to be found in his blue coat and old-fashioned gaiters engaged in acts of quiet and unobtrusive friendliness to all Hindus.

But if Hare had gone, his work survived, as did also the more aggressive spirit of De Rozio. Among the College textbooks we find Hume's *Essays on Restoration Comedy* and Tom Paine's *Age of Reason*. Its debating society accepts unanimously an ample resolution covering all the Rights of Man.

This 'Home of Learning' from an early stage, and up to the time of its passing under Government control, was in receipt of financial help from the Government. But what perplexed even the most optimistic of its official supporters was the obvious fact that its students at the close of its secularist regime were far more interested in the rights than in the duties of man. Intoxicated with the heady wine of western learning they were playfully inclined to tilt at everything, and particularly their own religion and society. But they had no designs or foundations for any substitute. A few, and notably the liberal-minded Krishna Mohan Bannerji, joined Duff's class of 'enquirers' and ultimately after a long pilgrim's progress became his most zealous disciples. But more were permanently content with the licence that they mistook for liberty and regarded the power that western knowledge gave them merely as a means of

MISSION INFLUENCE ON EDUCATION

shaking off social connections that had become irksome. If western education meant only or primarily the flouting of caste rules its doom was certain.

There was of course an inevitable reaction in favour of oriental learning, supported, as Duff thought, by Lord Auckland, whose well-meant efforts to draw India's attention to the educational possibilities of her own classics was stigmatised as 'an official system of education which jealously excludes all true religion'. But even without such attacks Auckland's plans, though justifiable, were doomed to failure. India was not at this stage going to forego the delights of western knowledge which she had just begun to enjoy. Government offices were clamouring for more and more English-knowing clerks. Brahmins in the newly founded medical classes were making up their minds to dissect corpses. The work must go on. But what was to be the social and moral equivalent of caste? And how was western education to be converted from an excuse for license into an instrument for the right and sober use of liberty?

It was fortunate for India that just when this question called for an answer, the impossibility of adequate provision being made by Government for all who desired western education was also becoming manifest. Both problems were solved by the Education Despatch of 1854, which followed the parliamentary enquiry and renewal of the Company's charter in 1853. This despatch owed much to the evidence given by Duff, Marshman and other missionaries before the parliamentary committee. Its ultimate form was due to the wise and farseeing mind of Charles Wood. The inauguration of the complete system of education which it prescribed was facilitated by the eager support of Dalhousie who had already anticipated some of its principles.

The Despatch provided amongst other things for a comprehensive system of grants in aid to all institutions

CHRISTIANITY AND GOVERNMENT OF INDIA

under private management that submitted themselves to inspection and fulfilled the conditions of sound education prescribed by Government. Though all reference to the work of Christian missions was carefully excluded from this portion of the Despatch, there could be no doubt that it was their co-operation that the Board of Control hoped chiefly to invite by this offer of financial assistance. There were in fact comparatively few institutions under any other form of private management at the time. Charles Wood reaffirmed emphatically the intention of the British Government to raise by education the moral standard of India and made it quite clear that 'the noble exertions of mission societies to guide the natives of India in the way of religious truth' were duly appreciated by all who emphasised this moral aim. It was clearly satisfactory that the agency which alone could hope to supplement the educational efforts of the Government was also in a position to supply the religious foundation of moral instructions which official institutions lacked. That it was possible for a 'neutral' Government to give a grant to all institutions alike, irrespective of their religious aims and with reference solely to their secular work, was established finally and categorically. It is true that the nervous and fussy Lord Ellenborough, who, by a change of government, assumed charge of the Board of Control soon after the despatch issued, refused to give it this interpretation and rejected a proposal to aid C.M.S. work among the primitive tribes of Bengal on the grounds that it was a violation of 'neutrality'. But in spite of his protests Wood's policy was maintained locally. Figures collected in 1859 showed that mission institutions in the Madras Presidency were receiving five times as much grant as all other private institutions put together. Almost all the aided secondary schools were under mission control. The provincial Government was satisfied that this generous

MISSION INFLUENCE ON EDUCATION

help to missions had roused no resentment at all. It was significant that the province which had done most for missions was also the province which had remained completely quiet in the year of Mutiny.

Undoubtedly the cordial relations that had been established between Duff and the earnest and influential band of non-Christian Hindu reformers had helped to dispel the apprehensions of Government.

Ram Mohun Roy, son of an agent of Surajud Dowlah, after renouncing idolatry at the age of sixteen, forsook the study of Persian and Sanskrit, and through the devious routes of Horace and Buddhist writers drew near to the English as the only possible agents of amelioration in India. On leaving his post of Collector's Diwan at the age of fifty he devoted himself to the study of the Bible in Hebrew and Greek and came to regard the precepts of Jesus as the only possible guide to peace and happiness. His attitude towards Brahminism was substantially that of Erasmus towards the practices of Rome. It is possible that he might have professed Christianity but for the over-zeal of some strict Baptists who condemned him as a 'legalist'. He died in 1834, a Unitarian at heart, but professing Hinduism without conscientious scruples in order to secure his property for his heirs.

It did not take Ram Mohun Roy long to find out that Duff's College was likely to do far more for the regeneration of India than Hare's 'Home of Learning'. From the very start he was active in gaining the support of his Hindu friends for Duff. Bible instruction was clearly unequalled for morals. The Lord's Prayer was the best in the world. At the opening of the college he joined in this prayer and persuaded the Brahmin students to open for the first time and read the Bible which Duff had resolutely prescribed as the first textbook.

It is significant that no oriental college was opened

CHRISTIANITY AND GOVERNMENT OF INDIA

during this whole period as a protest against Duff's activities. We hear only of a Bombay petition against all mission schools following the conversion of some Parsees in the 'thirties, and of the formation of a Hindu anti-mission society and establishment by Jesuits and an Irish adventurer of a free anti-Protestant College in the 'forties. In fact, such opposition as Duff aroused was on western or agnostic lines and dissociated entirely from oriental orthodoxy. As such it was rightly disregarded by the Government.

CHAPTER XIII

FURTHER EDUCATIONAL PROBLEMS

Mission attitude towards oriental studies—its justification and weakness—Bible teaching in government schools—firm refusal by Government—confidence in pioneer work of secular education—exclusion of all references to religion—final settlement in Wood's despatch—no Bible teaching—but irksome restrictions removed—acquiescence of missions—faulty prognostications.

IT was not only a definite and honourable place in the educational system that was won by Christian missions during this period. They also established gradually their claim to be consulted in the framing and execution of important educational measures. The part played by Duff in the discussion that preceded the decisions of 1835 and 1854 has already been noted. Before the close of the period missions were represented on most educational committees ; in the elaboration of the first Indian universities, on lines laid down in the 1854 despatch, Duff and Wilson played an influential part ; and they filled important and onerous posts in the earliest stages of Calcutta and Bombay universities. Like their predecessors, Schwartz and Carey, they had shown in fact that a good Christian is endowed with judgment and discerning tact that enhance his value in Councils of State. Their voice was often heard on subjects not directly connected with education or religion. Duff in particular had much to do with the removal of certain evils in the land tenure system of Bengal which caused popular discontent. Wilson was a constant and trustworthy referee in all questions of indigenous customs, literature, traditions and religion.

CHRISTIANITY AND GOVERNMENT OF INDIA

It was the missionaries no less than the Hindu reform party who kept persistently before the Government, in the years that followed the impetuous regime of Bentinck, Trevelyan, and Macaulay, the supreme importance of education. And it was the same combination of interests that sternly opposed all attempts to find a place in the curriculum for oriental culture and literature. 'In undertaking to teach mere Hindu or Mohammedan literature you bound yourselves to teach a great deal of what was frivolous, not a little of what was mischievous, and a small remainder indeed in which utility was in any way concerned.' This rebuke from the Directors in 1824 was endorsed by Duff and Wilson. It was unfortunate but perhaps inevitable that men whose attention was concentrated on the darker side of Hindu and Islamic society, and who saw in Christian teaching the only remedy for India's woes, should reject the oriental classics as wholly unsuitable for youthful consumption. They were not, like Macaulay, wholly ignorant of the literary excellence of oriental literature; nor did they deny that there was much to be found in it of moral and spiritual value. Wilson in particular was a distinguished and enthusiastic Orientalist. And Duff strongly supported the patronage by Government of oriental research and scholarship. But such work could play no part in the moral uplifting of the nation. The foundations of Indian literature were essentially false and insecure. It could never form an integral part in any scheme of natural character building.

We may rightly deplore an attitude that postponed indefinitely the methodical study of indigenous culture and cut off India from a just appreciation of the strength and weakness of all that underlay its social and religious systems. But if we remember the appalling evils that were justly associated with this culture when our education courses were being devised, and the sturdy part

FURTHER EDUCATIONAL PROBLEMS

played by the opponents of this culture in the removal of these evils, we shall not find it hard to excuse their excess of zeal.

We may criticise the rhetorical exuberance of Duff's most famous speech in Exeter Hall. But no one who has studied his life and work can question the sincerity of his peroration or deny his ability to quote chapter and verse for his denunciation. Condemning those who wrote sentimentally of India and its

Fields of paradise and bowers
Entwining amaranthine flowers

he passed on to depict what he had found there ; ' above, the spiritual gloom of a gathering tempest, relieved only by the lightning glance of the Almighty's indignation—around a moral wilderness where all light dies and only death lives—and underneath one vast catacomb of immortal souls perishing for lack of knowledge '. To the culture of a land that had thus impressed its woes upon him he could not, if he would, pay educational homage.

In another sphere the advice tendered by Christian bodies was less effective. It was at one time the clear and unanimous opinion of these agencies that Christian teaching of some kind should be given in the schools and colleges maintained by the British Government. This was also the opinion of the Lawrences and Edwardes and many other stalwart Christians in the official world whose work and character has already been examined. As to the nature and extent of this teaching there was great variety of opinion. Nor was there agreement as to whether attendance at such instruction should be compulsory or not. But many agents of the Government, and practically all the agents of Christian missions, held that the gift of western civilisation, divorced from all knowledge of its religious foundations, was educa-

CHRISTIANITY AND GOVERNMENT OF INDIA

tionally unsound and morally dangerous. Reference to the Government's pledge of 'religious neutrality' was met by a refusal to admit that such neutrality involved the deliberate exclusion of a vital and integral part of 'western education' from courses that professed to make such education their aim. It was argued that instruction in the principles and history of Christianity, and exposition of its bearing on the history of civilisation, was possible without any suspicion of 'proselytising'. The exclusion of such subjects suggested inevitably to the Indian mind that they were regarded by the Government as unimportant.

To such arguments the government as a whole, despite the views of some of its highest officers, showed at no time any intention of capitulating. Their wisdom and the results of their decision on Indian history will be discussed separately and later. Those who realise the inevitable limitations of government schools and colleges, and the difficulties under which official teachers labour, find it hard to believe that the acceptance of missionary advice would have promoted substantially the advance of Christianity or altered the Indian attitude towards western civilisation. The solution of the problem, which was far more vital and far-reaching than the authorities realised, lay in the gradual withdrawal of the Government from the direct control and management of a higher education which was necessarily cribbed, cabined, and confined by their well-meant efforts, and in the evolution of a system of Christian education free from all the implications of a 'neutral' system. We are concerned here rather with the motives of the Government and the modes of their reaction to Christian pressure.

That Bentinck, Macaulay, and Trevelyan expected the Christianisation of India as a result of a purely secular western education has already been explained.

FURTHER EDUCATIONAL PROBLEMS

This view was held by a few thoughtful Christians in India and England even in later years. Canon Mozley,¹ discussing the prospects of Christianity in the 'fifties, warmly supported the 'neutral' attitude of the Government and argued that their so-called 'godless' education left the Indian mind purged and desiring to be filled. 'Deism', he wrote, referring to the negative effects of such education, 'is not a possible resting-place'. He believed firmly what several witnesses before the Parliamentary committee of 1853 had affirmed, that government schools were doing pioneer work for Christianity. The students of such schools, he understood, were as distinguished for character and strength of mind as the product of mission schools and provided ultimately as many converts to Christianity.

An obvious retort to this line of argument was that, if the Government really believed that the system of education was, as they stated to their Christian critics, a valuable preparation for Christianity and a necessary stage in evangelisation, they were acting dishonestly in assuring the Indian world that it was consistent with the strictest neutrality.² What they were really engaged in was the undermining of a society and culture which could, under the terms of their constantly affirmed neutrality, claim their protection and respect. If they did not think that they were paving the way for Christian work they were disregarding the real interests of India in destroying the foundations of society without any thought for providing a social and moral equivalent. That the Government felt scruples on this point was clear from their readiness to accept the educational co-operation of missions and from their uneasiness at the recklessness and licence engendered by the 'Home of Learning' in its early stages.

¹ In *Essays in History and Theology*.

² The dilemma is well put by Maclear in *Christian Statesmen and our Indian Empire*.

CHRISTIANITY AND GOVERNMENT OF INDIA

What really influenced the Government, and still more the Directors at home, was their responsibility for the maintenance of law and order in India, and their dread of endangering imperial interests or the prosperity of the country by popular discontent or suspicion. What they failed to see was the importance of removing all suspicion by a bold and resolute policy. That Christian interests would have been advanced by the introduction of Bible teaching in Government schools may well be doubted. But it is certain that the meticulous exclusion from the school curriculum of everything that could possibly be connected with the professed faith of the supreme authorities in India merely puzzled the Indian mind and did not in any way inspire confidence. Minds naturally subtle and suspicious argued that a Government which ostentatiously ignored in education a faith that they professed was false either to its own profession or to its alien subjects. Insincerity was a quality which experience had taught India to expect from her rulers. But it was not a quality which had ever strengthened a dynasty or won for it affection and respect.

This official nervousness, so fatal to all rulers of oriental races, betrayed itself in the regulations that, up to 1854, excluded the Bible even from the libraries of Government institutions, and forbade official teachers to explain any reference to religion in English literature or history, or to answer, in or out of school, any questions from students on religious topics.¹ In Jane Taylor's poems, which were introduced as a moral tonic, editorial changes respected the religious susceptibility of non-Christian readers. For 'Christian' where it occurred 'soldier' was substituted. And though Solomon was free from all Christian associations, it was thought wiser to substitute, with consequential changes, the phrase

¹ In 1849 a convert to Christianity was dismissed from the Government College in Calcutta.

FURTHER EDUCATIONAL PROBLEMS

‘wise man’ for his actual name. The story of the Hebrew race was found to be historically as dangerous and untouchable a subject as the history of Christianity. Meanwhile stories from Hindu and Mohammedan religions were, despite Duff’s protests, freely admitted into the vernacular reading books. When the Madras Government proposed to include the Bible, not indeed in a school curriculum, but in the list of textbooks allowed for the examinations of candidates for public service, they were reminded by the Directors that it was ‘neither expedient nor prudent to introduce any branch of study which can in any way interfere with the religious feelings and opinions of the people’. Yet Macaulay had calculated with confidence that western science would in forty years remove all traces of idolatry !¹

The Despatch of 1854 removed some of the more tiresome and ignominious restrictions. The Bible was admitted to libraries and the teacher’s activities outside his classroom were no longer confined. But the exclusion of all references to Christianity in Government school courses was emphatically endorsed. And the universities, which the despatch brought into being, were to admit in their examinations for degrees no subjects connected with religious belief. To the philosophy student Butler’s *Analogy* must be anathema. The professors of Sanskrit and Persian must treat these languages as if they had never been employed on religious themes.

Such was the perplexing and ambiguous world in which mission education secured a footing in 1854. To Duff and Wilson it seemed at the time a satisfactory compromise. With a fair field and no favour, adequate grants in aid and no restriction on religious instructions, Christian education would surely flourish and make good

¹ See Trevelyan, *Life and Letters of Lord Macaulay*.

CHRISTIANITY AND GOVERNMENT OF INDIA

the defects of the Government schools. They would perhaps have been less confident if they had foreseen the reluctance of Government to withdraw from direct participation in higher education, and the rapid growth in the number of schools and colleges ready to take advantage of the grant in aid system, but uninspired by religious motives. Lord Ellenborough was no friend to mission work in India and it was hardly to be expected that his advice would commend itself to missionaries. But there was more wisdom in his words of warning than was generally recognised when he suggested in a discussion arising out of the claims of Christian work on government support, that 'the missionary left to himself may obtain some though probably no great measure of success. Helped by Government he loses his chances and impedes the measures of Government'. What neither he nor his opponents understood was that it was not state support but identification with state machinery that might ultimately embarrass the mission cause.

CHAPTER XIV

THE MUTINY IN ITS RELIGIOUS ASPECT

Speculation on causes of Mutiny—religious apprehension one of the causes—Christian aims and methods not responsible—regions of greatest mission activity unmoved—not a ‘holy war’—but genuine fear of religious interference—due to mischief makers—secular education—and misunderstanding of official oscillation—Indian respect for frank and genuine devotion—and fear of disintegrating forces—the Queen’s proclamation of 1858—final acknowledgment of Christian basis—from ‘neutrality’ to tolerance—ready response in India—the fruits of the Mutiny in India.

WHEN the causes of the Indian Mutiny were investigated there were not wanting those who attributed the disaster primarily to popular resentment caused by the Government’s patronage and support of Christian mission work on its educational and philanthropic side, by its legislation on Christian principles against social evils, such as infanticide, suttee, and converts’ loss of civil rights, and by the open profession of Christianity and support of proselytising agencies by many of its individual officers. Nor was this opinion confined to the antagonists of mission work in India. To John Lawrence and Outram the events of 1857 presented themselves as the inevitable protest of pagan barbarism against Christian civilisation. Like Lord Ellenborough they attributed the Mutiny to mission influence. But unlike the Lord of Doubting Castle, Mr. Valiant and Mr. Greatheart were convinced that they had seen the final agony of defeated Moloch.

Opposed to the Ellenborough school, though not wholly to the views of Lawrence and Outram, were those

CHRISTIANITY AND GOVERNMENT OF INDIA

who followed Duff in finding the cause of the catastrophe in the nervous apprehension of the British Government, its dread of emphasising its true faith and occasional appearance of repudiating it, and its pandering to heathen prejudice. The penalty had been paid for the sacrifice of Christianity on the altar of worldly expediency.

We may leave out of account the various causes of discontent, whether real or imaginary, that had no connection, direct or otherwise, with religion. Undoubtedly a fear that the religions of the country, and social usage based thereon, were being attacked was, as stated by Lord Canning in his report and by Disraeli in the House of Commons, among the causes of the revolt. To what extent had the Government, by its occasional support or occasional repudiation of definitely Christian aims, been responsible for this fear ?

The more plausible view, that its Christian tendencies had stirred Hindu and Islamic orthodoxy to revolt, cannot survive a reference to facts. It was not urged by any of the provincial Governments. Only one Government in fact devoted any serious consideration to it ; not even this Government suggested the possibility of any change of policy in deference to such a view. The official view generally was the same as that of the Madras Government on the Vellore mutiny of 1806. Those who for other reasons wished to stir up discontent had been able to persuade an uneducated population that religion was in danger. There was no definite action or formulated policy of the British Government that could possibly be misconstrued into an attack on religion without special pleading on the part of ill-disposed persons. Except in regions where such malice had been at work there were no traces of religious excitement due to Christian legislation or administrative action.

More particularly was it noticeable that most of the trouble had occurred in Agra and Oudh, where mission

THE MUTINY IN ITS RELIGIOUS ASPECT

work had made least progress, and in the Bengal army where caste prejudice and religious scruples had been most carefully safeguarded, where native Christians had been rigorously discouraged and attempts at conversion forbidden. In the Punjab, where officials had been singularly bold in their support of missions, there had been no widespread uprising. Mission operations in the most orthodox parts continued with the approval of the authorities throughout the mutiny. In Madras Presidency, the stronghold of Hindu orthodoxy, where Mission work had made most progress, and where Government aid to mission educational work had attracted general attention, quiet had reigned supreme. Even W. D. Arnold, who, as director of public instruction in the Punjab, had been meticulous in his regard for indigenous religions, was unable to record any popular dissatisfaction due to the financial support of mission schools.

It is true that many Indian Christians perished, not a few heroically, as martyrs for their faith. But for the